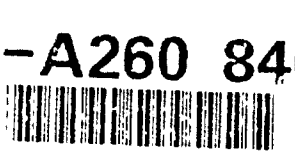


NAVAL POSTGRADUATE SCHOOL

Monterey, California

THESIS

THE IMPACT OF REPORT OF INVESTIGATION WRITING STYLE ON THE ASSESSMENT TIMES, IMPRESSIONS, PERCEPTIONS AND PREFERENCES OF ADJUDICATORS

by

Mark D. LaViolette

Thesis Advisor: James E. Suchan, Ph.D.

Approved for public release; distribution is unlimited

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION Naval Postgraduate School 6b. OFFICE SYMBOL *(If applicable)*	7a. NAME OF MONITORING ORGANIZATION Naval Postgraduate School
6c. ADDRESS (*City, State, and ZIP Code*) Monterey, CA 93943-5000	7b. ADDRESS (*City, State, and ZIP Code*) Monterey, CA 93943-5000
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL *(If applicable)*	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (*City, State, and ZIP Code*)	10. SOURCE OF FUNDING NUMBERS Program Element No. / Project No. / Task No. / Work Unit Accession Number

11. TITLE (*Include Security Classification*)
THE IMPACT OF REPORT OF INVESTIGATION WRITING STYLE ON THE ASSESSMENT TIMES, IMPRESSIONS, PERCEPTIONS AND PREFERENCES OF ADJUDICATORS

12. PERSONAL AUTHOR(S) Mark D. LaViolette

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (*year, month, day*)	15. PAGE COUNT
Master's Thesis	From To	1992, December 17	119

16. SUPPLEMENTARY NOTATION
The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

17. COSATI CODES			18. SUBJECT TERMS (*continue on reverse if necessary and identify by block number*)
FIELD	GROUP	SUBGROUP	High-impact writing, Low-impact writing, reader perception, impression, and preferences. Report of Investigation, Adjudicators

19. ABSTRACT (*continue on reverse if necessary and identify by block number*)

This thesis examined the impact of document design, organization and writing style of a Report of Investigation (ROI) on the adjudicators charge with assessing them. Specifically, the adjudicators' assessment time, impression of case information, perception of the field agents writing the cases, and writing style preferences were analyzed. A total of (40) Army, Navy, DISCR, and Air Force Adjudicators were tested using both "high" and "low-impact" style ROI's. A four part questionnaire captured their assessment times, impressions, perceptions, and preferences between the two different style cases. The results show that the two style cases produce statistically different adjudicators impressions of case information, and perceptions of the field agents writing the cases. They also show that adjudicators prefer the high-impact style over the low-impact ones. However, the high-impact style cases do not show statistically significant assessment time improvements over the low-impact style.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION	
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS REPORT ☐ DTIC USERS	UNCLASSIFIED	
22a. NAME OF RESPONSIBLE INDIVIDUAL James E. Suchan	22b. TELEPHONE (*Include Area code*) (408) 656-2905	22c. OFFICE SYMBOL AS/SA

DD FORM 1473, 84 MAR — 83 APR edition may be used until exhausted. All other editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

ABSTRACT

This thesis examined the impact of document design, organization, and writing style of a Report of Investigation (ROI) on the adjudicators charged with assessing them. Specifically, the adjudicators' assessment time, impression of case information, perception of the field agent writing the cases, and writing style preferences were analyzed. A total of (40) Army, Navy, DISCR, and Air force adjudicators were tested using both "high" and "low-impact" style ROI's. A four part questionnaire captured their assessment times, impressions, perceptions, and preferences between the two different style cases.

The results show that the two style cases produce statistically different adjudicator impressions of case information, and perceptions of the field agents writing the cases. They also show that adjudicators prefer the high-impact style over the low-impact ones. However, the high-impact style cases don't show statistically significant assessment time improvements over the low-impact style.

TABLE OF CONTENTS

I. INTRODUCTION

Over the last several years, the Department of Defense (DoD) has sought to improve the personnel security screening process. This desire was prompted primarily by the rash of security breaches over the last several years. One area where improvement is desired is the area of information assessment. This assessment occurs when personnel at adjudication facilities evaluate Personnel Security Investigation (PSI) documentation obtained from the Defense Investigative Services (DIS).

The Report of Investigation (ROI) is the primary information conduit between these agencies. More specifically, the ROI is the written interface between the DIS Field Agent who conducted the PSI and the adjudicator responsible for assessing the case.

One objective of all involved in the security screening process is to improve the quality and clarity of the ROI. ROI improvements will hopefully increase reader comprehension and general document effectiveness. Several important factors that affect the quality of the ROI are the document design, organization, and writing style.

Two studies (Suchan 1989, and 1992) have examined these factors for the Defense Personnel Security Research and Education Center (PERSEREC). Suchan's research is outlined in

the PERSEREC technical report titled "Comparison of High and Low-impact Report of Investigations on Adjudicators' Decision Making: A Pilot Study". His primary focus in that study is to determine the affect that organization, document design, and stylistic factors have on the decision making ability of adjudicators. This thesis builds on that work. It specifically examines how the ROI document design, organization and writing style affect the following:

- The impressions of the adjudicators concerning the case information;
- The perception of the adjudicators about the field agent who wrote the case;
- The preference of the adjudicators for one of the two case styles used in the study;
- The case processing time required by the adjudicators.

The remainder of this chapter will discuss in more detail the background of Suchan's research, present the specific research question that the thesis will attempt to answer, and then end with a preview of the remaining chapters.

A. BACKGROUND

As stated earlier, this thesis continues the ongoing research of Suchan. His research is concerned with the adjudicators ability to accurately read ROI's and make reliable and consistent judgements about a subject's security worthiness. Suchan's research objective is to determine if

changes in document design, organization, and writing style, will enable adjudicators to make higher quality decisions. This decision making ability of the adjudicator is the crux of the personnel security process, which has the purpose of weeding-out subjects who are capable of committing espionage.

Drawing from the existing body of literature that defines the qualities of a clearly written document, Suchan composited those qualities into two ROI's. The clearly written ROI's contained organizational features such as internal previews and clear transitional tags; document design characteristics such as strategic use of lists, bullets, heading and white-space; and stylistic traits such as active verbs and right-branching modifiers. The total of these features is commonly referred to as a "high-impact" style.

The converse of the high-impact style is referred to as the "low-impact" style. This is the status-quo style field agents currently use when writing ROI's. This style includes features such as poor document design, "wall-to-wall" prose, no headings or lists, and no use of bold print or other highlighting devices; lack of internal previews at the beginning of long sections; long convoluted sentences that strain short-term memory; passive verbs; and finally lack of old information/new information patterns to create coherence.

Suchan tested both the high-impact and low-impact ROI's on a sample of (40) adjudicators from four adjudication sites; (12) from the Army Central Adjudication Facility; (12) the

Navy Central Adjudication Facility; (4) from the Air Force Security Clearance Office; and (12) from the Directorate for Industrial Security Clearance Review at Columbus, Ohio. His objective was to determine whether differences in ROI design, organization, and writing style affected the decision making ability of the tested adjudicators.

A four part questionnaire was used to collect the necessary data for the research, although Suchan only analyzed the first part of that questionnaire. The remaining three parts of the questionnaire collected data concerning the following:

- The impressions of the adjudicators concerning the case information;
- The perception of the adjudicators about the field agent who wrote the case;
- The preference of the adjudicators for one of the two case styles used in the study;

Suchan's research results provide the basis for this thesis. The unexamined data from the remaining three parts of the questionnaire were used as the primary source of data for the analysis. The results of his study are outlined in the next chapter, the Literature Review, while a more detailed description of his research design is included in the Research Methodology Chapter.

B. RESEARCH QUESTIONS

This thesis will answer the following primary and secondary research question:

1. Primary Research Questions

This thesis's primary objective is to analyze the remaining three parts of the Suchan questionnaire. Specifically, it will determine if there is a statistical significance in the questionnaire responses for ROI's written in a high-impact style versus a low-impact style. The primary research questions for the thesis are as follows:

- Will there be statistically significant differences between adjudicators' impressions of their ability to process case information presented in a high-impact ROI versus a low-impact one?
- Will there be statistically significant differences between adjudicators' perceptions or feeling towards the field agents who wrote a high-impact ROI as compared to those who wrote the low-impact ROI?
- Will there be statistically significant differences in adjudicators' preferences for the case information presented in a high-impact versus the low-impact style?
- Will there be statistically significant differences in the adjudicators' processing time of the case information presented in a high-impact style versus the low-impact style?

2. Secondary Research Questions

The thesis will answered the following secondary research questions:

- Will there be any statistical differences in the primary research questions presented above, when results from the adjudicators at the various central adjudication sites are analyzed independently?

- Will there be any statistical differences in the primary research questions presented above, when the population of adjudicators is broken down demographically?

C. CHAPTER PREVIEW

This section discusses the organization of the remainder of the thesis and previews each coming chapter.

1. Literature Review

An outline of the results of prior related research and a discussion of the significant published literature on the subject of document design, organization, and writing style will be presented.

2. Research Methodology

A detailed description of the research methodology used in the thesis is presented. Both case selection and questionnaire content are examples of topics discussed in this chapter.

3. Presentation and Analysis of Adjudication Times and the Adjudicator's Impressions of Case Information

A presentation and analysis of the adjudication times and Part II of the questionnaire is the focus of the chapter. Part II covers the impressions of the adjudicators concerning the case information.

4. Presentation and Analysis of Questionnaire Part III Results: the Adjudicator's Perceptions of Field Agents

Similar to the Preceding chapter, an analysis of Part III of the questionnaire and discussion of the statistical

testing results is presented. Part III tests the perception of the adjudicators about the field agents who wrote the case.

5. Presentation and Analysis of Questionnaire Part IV Results: the Writing Style Preferences of Adjudicators

This chapter present the result of Part III of the Questionnaire. Part III determine the adjudicators preferences between the high and low-impact writing style.

6. Conclusions and Recommendations

This chapter summarizes the conclusions and recommendations of the thesis.

II. LITERATURE REVIEW

A. CHAPTER INTRODUCTION

This chapter focuses on the significant published literature concerning the subject of document design, organization, and writing style. Much of the document improvement strategies discussed in this literature was incorporated into the revised high-impact ROI's. The literature review will be presented in three sections. The first section outlines the published body of literature associated with the document factor stated above; the second section shows the limited amount of literature available in the following areas:

- Reader impressions of written communication,
- Reader perception of the writer of a written communication,
- Reader's writing style preferences;

and finally, the third section gives a detailed description of the results of several PERSEREC studies in the area of ROI document design, organization and writing style. Included in this third section, will be a discussion of the results of the Suchan study on which this thesis is a continuation.

B. DOCUMENT FACTORS

1. Readability Formulas

Readability formulas are important because for decades researchers have used them as a dominant tool for measuring document effectiveness. This study avoided using these formulas to determine the relative readability and efficiency of current ROI's because of their significant limitations. One particular researcher (Seltzer, 1981) summarizes their limitation the best.

Seltzer argues that because readability formulas only assess sentence length and word choice, they fail to account for important reader comprehension factors. These factors include:

- the reader's interest in the document;
- the reader's familiarity with a specialized language that might be used in a document;
- the effect that convoluted sentences, poorly placed modifiers, and other syntactic difficulties have on a reader's ability to process a sentence;
- the reader's ability to see easily logical association between groups of sentences and paragraphs.

Another important research study (Hirsch, 1977) points out other flaws in these formulas. Hirsch argues that readability formulas fail to consider several important factors that contribute to a document's effectiveness. He believes that to make a document readable and easy to understand, the writer must use organizational, syntactic, and

linguistic strategies that will constrain meaning. This is accomplished by reducing the semantic-syntactic possibilities that can occur in a clause, sentence, paragraph, or even a document. Hirsch also contends that subject-verb patterns, the voice of verbs, clause length, and transitional tags can be used in conjunction with each other to improve document processing speed and comprehension.

It is clear that there are severe limitations to using readability formulas when assessing the effectiveness of a document. The above two researchers point out their significant flaws and their argument against these formulas. However, they only allude to the specific factors that make a document effective.

Those specific factors include subject-verb-object; transitional tags and internal previews; active verbs; shortened paragraphs, sentence and clause length; and several others. These factors were used to generate the revised high-impact document in the Suchan Study. The remainder of this section will be devoted to outlining the literature that describes the above stated document effectiveness factors.

2. Document Organization

Several business communication researchers have made significant discoveries about the factors that influence information processing. Two particular researchers (Fielden & Dulek, 1984) have studied and assessed document

effectiveness from a macro-organizational perspective. They argue that a "bottom line" communication technique decreases reading time and improves document comprehension. The essence of this technique is for the writer of nonsensitive documents to state their purpose for writing in the first paragraph.

These researchers further argue that to decrease reading time and improve comprehension in longer documents, the writer should also include a contract sentence immediately following the bottom line. The contract sentence, basically an internal preview, organizes the remainder of the communication for the reader by providing a skeletal framework of the major point to be covered and the order in which they will be presented.

Although Fielden and Dulek cite no empirical evidence to support their claims about the advantages of bottom lines and contract sentences, the work of two cognitive psychologists (Bransford & Johnson, 1972 and 1973) justify the value of these two organizational strategies. Bransford and Johnson found that subjects who were provided a concrete title to a very general, context-free, written passage could better understand and remember the passage than those not provided a title. The title provided a mental model that helped readers classify and integrate information. Similarly, a bottom line and contract sentence may help a reader create a mental model of a document's content and constrain its meaning.

Another study supports Fielden's and Dulek's findings. This study (Suchan, 1989) assessed the communication efficiency of the high-impact style versus the traditional bureaucratic low-impact style favored by the government. The study involving 262 naval officers, and Suchan found that the high-impact style took the officers between 17% and 23% less time to read than the bureaucratic style, and produced much better message comprehension.

3. Informational Design

Another document factor that determines its effectiveness is visual design. Visual design includes the writers use of headings, list, bold print, underscoring, spacing, and so on. Several researchers (Kostelnick, 1988; Hartley & Trueman, 1985; Battison & Landesman, 1981) have confirmed that using these strategies improves effectiveness.

Kostelnick found that local design strategies (lists, bullets, indentation, and so on) may restrain meaning by enabling readers to code and chunk information more easily. Hartley and Trueman have proved through extensive testing that headings improve reader performance. Battison and Landesman have shown that FCC regulations revised into a more visually appealing question-answer format improved reader comprehension.

4. Sentence Level Research

Three researchers (Miller, 1956 and 1970; Bever, 1972; Clark & Clark, 1968) have studied how readers use short and long term memory to process sentences. In particular, Clark and Clark found that because a reader's short-term memory can hold about seven chunks of information, readers confronted with too much modifying detail (left embedding of information), may have difficulty retaining in short-term memory the primary subject-verb unit of the sentence.

The relevance of this research is that it justifies the need for writers to create word sequences that are easy for readers to form into stable groups. A writer should use the subject-verb-object order throughout the document to create a stable, predictable pattern that places little demand on the reader's short-term memory. The use of these sequences should increase reading speed and improve comprehension.

5. Active-Passive and Word Choice Research

Three studies (Olson & Filby, 1972; Danks & Sorce, 1973; Charrow & Charrow, 1979) have shown that readers process active verbs faster than passive ones. This is because passive verbs invert the typical subject-verb-object order syntactic pattern.

Finally, research (Rosch, 1973 and 1975) has shown that we are able to process quickly and accurately language that represents basic classifications or prototypes. Rosch

found that language which is relatively concrete (e.g. "cow" versus "bovine") can trigger other clarifying word (abstract background information) stored in long-term memory. What constitutes concrete language, however, may be organizationally unique.

For example, adjudicators are accustomed to reading specialized terms such as "PSI" and "ROI". These terms trigger a range of concrete associations in the adjudicator but not in a reader unfamiliar with security issues. In short, the consistent use of context-based, organizationally specific specialized terms does not degrade comprehension.

These results support the assertion that if a writer does not use concrete language as defined by the organizational context, the reader may not see recognizable prototypes and thus must attempt to construct them while reading. This construction process increases reading time, strains short-term memory, reduces comprehension, and degrades document effectiveness.

C. READER PERCEPTION, IMPRESSION, PREFERENCE RESEARCH

An exhaustive on-line computer search was conducted to determine the extent of prior empirical research on readers perception of writers based on writing style and document design. Only 3 studies were located.

Brown and Herndl (1986) found that upper-level managers in a large engineering firm perceived reports written in a

bureaucratic style to be more competent and objective than reports using plain language guidelines that the company had recently implemented. Rogers (1989) discovered that automotive managers strongly resisted using company plain language criteria in their dealer contact reports because they believed they would be perceived by their bosses as being less thorough and analytical.

Another Study (McClure, 1990) surveyed the lower management levels of Sprint/United Telephone of Florida to determine if these managers perceived their reading preferences to be the same as those of their upper-level managers. McClure found that employees were more aware of their boss's reading preferences than their CEO's. Also, as communication flowed to higher levels of management, the employee wrote longer sentences, used bigger words, and relied on the passive voice in order to appear more formal, respectful, and educated. These choices led to a increased reading difficulty.

D. PERSEREC STUDIES

As shown in the earlier sections of this chapter, there exists a significant body of literature that defines the qualities of a clearly written document. PERSEREC has conducted three studies (Haag, Schroyer & Crawford, 1989; Suchan, 1989 and 1992) that relate to adjudicators' ability to process and assess information.

1. Haag, Schroyer, and Crawford Study

Haag, Schroyer, and Crawford found that adjudicators are not satisfied with the way information is presented and that they desired the reports be written more clearly. They also concluded that adjudicators had difficulty locating and extracting information from narrative segments of ROI's. The adjudicators hoped that the ROI could be formatted to parallel and support the adjudication decision-making process.

2. Suchan (1989) Study

Similarly, Suchan also found that the adjudicators were dissatisfied with the writing style of the ROI. In his other 1989 study, he used talk-aloud protocols and field interviews to discover that adjudicators had difficulty sorting and classifying information in the narrative sections of ROI's with significant derogatory information. Adjudicators often had to reread the report sections, take extensive notes, and use other strategies to create the information patterns necessary for them to apply the adjudication criteria. This 1989 study was the precursor to the 1992 Suchan study on which this thesis is based.

3. Suchan (1992) Study

Suchan's primary objective in, "The Comparison of High and Low-Impact Report of Investigation on the Adjudicators' Decision Making: A Pilot Study", was to determine whether adjudicators assess ROI's written in a high-impact style

differently from the same ROI's written in the current low-impact style. Secondly, he examined if adjudicators at various central adjudication sites assessed differently the high and low impact ROI's. Furthermore, he determined if adjudication site affected the degree to which adjudicators' decisions conformed to those of their superiors.

Suchan's results contradict previous laboratory research that show clear writing, as exemplified by the high-impact style, helps readers to more effectively process documents. The data show there are no statistically significant differences in decision type between the high and low impact ROI's. Also, high-impact ROI's did not result in decisions that more closely matched those of supervisory adjudicators, except at the Army adjudication site. In short, the high-impact ROI's did not help adjudicators make better quality decisions.

III. RESEARCH METHODOLOGY

A. CHAPTER INTRODUCTION

This chapter gives a detailed outline of the research methodology developed and used to gather data for this study. It also describes the techniques used by the author to analyze the remaining three parts of the questionnaire. The topics included in this chapter are as follows: case selection, content and treatment; description of the adjudicator sample population; testing procedures; questionnaire content; statistical methods for analyzing the questionnaire results; organization of analysis; and the limitations of the methodology and analysis.

B. CASE SELECTION, CONTENT, AND TREATMENT

1. Case Selection

Earlier PERSEREC research (Wiskoff and Fitz, 1991) found that adjudicators dealt with an average of 1.7 issues per case and assessed cases with multiple issues 46.3% of the time. Consequently, cases that contained two issues were used in this study.

Furthermore, research shows that adjudicators most often dealt with Financial, Drugs/Alcohol, and Emotional/Mental issues. One of the most frequent double issue combinations was drug and alcohol (Lewis, Koucheravy,& Carney,

1989; Wiskoff & Fitz, 1991).

With this in mind, multiple issue cases containing combinations of Financial, Drugs/Alcohol, or Emotional/Mental derogatory information were requested from the Personnel Investigation Center (PIC). After careful reading of (56) micro-fiche cases that met these criteria, two cases were chosen that best met the multiple issue and issue frequency criteria. These cases also reflected the document design, organizational, and stylistic characteristics typical of ROI's containing derogatory information (Suchan, 1989).

2. Case Content

The two cases selected are called Czarnek and Rokitka, the pseudonyms for the subject in each case. A brief overview of each case is described below.

a. Czarnek

Czarnek is a 24 year-old male applying for a Top Secret clearance required for a security guard position. The major derogatory information in his case includes:

- falsification of his PSQ,
- aberrant behavior (lying, personal threats, and insubordination) resulting in an honorable discharge from the military after only 5 weeks in service,
- personal and on-the-job dishonesty,
- minor criminal conduct resulting in loss of employment,
- minor financial matters

b. Rokitka

Rokitka is a 49 year-old female applying for a Top Secret clearance which is necessary for her to work as a computer programmer. The major derogatory information in her case includes:

- alcohol/drug abuse: use of marijuana, cocaine, and barbiturates
- criminal conduct: use of cocaine on the job
- falsification of PSQ

3. Case Treatment

Suchan revised both the Czarnek and Rokitka cases using document design, organizational, and stylistic strategies that research has demonstrated leads to improved comprehension (Duffy, 1985; Redish, 1989; Seigel, 1978; Selzer, 1983; Suchan, 1989). Furthermore, a thorough literature review was conducted to ensure that each of the independent variables used in revising the low-impact ROI's improved comprehension. These independent variables include:

- Paragraph Length: paragraphs were no longer than 3-4 sentences; one sentence paragraphs were used to emphasize important information (Felker, Redish, Peterson, 1985).
- Headings and Subheadings: major headings and subheadings were used to telegraph major sections of derogatory information (Redish,1989).
- Lists and Bullets: these graphic aids highlighted significant information, broke out statistical information, and laid out complicated chronological sequences (Benson, 1985; Rubens, 1986).
- Internal Previews: at the beginning of long derogatory

sections, an internal preview was used to provide a quick overview of the major points that were to come in that section. The language in the preview mirrored the language in the major headings (Redish, Battison, Gold, 1985).

- Clauses in Subject-Verb-Object Order: subjects, verbs, and objects within clauses were kept as close to each other as possible to avoid strain on short-term memory (Fodor & Garrett, 1967).

- Modifier Strings Right Branched: long strings of modifying information were placed to the right of the object (right branching) versus before the subject (left branching). Research has shown that right branching of information enables readers to read faster and remember more easily information (Haviland & Clark, 1974; Miller & Isard, 1964).

- Active Verbs: when appropriate, passive verbs were changed to active verbs to make clear the agent of a particular action (Mirel, 1988; Selzer,1983).

- Explicit Transitional Tags: clear transitional tags, often left out in narrative report writing, were added to make it easier for readers to quickly grasp relationships between ideas and sections of reports (Guillemette, 1987).

Only material field agents had written was revised. Information contained in subjects' and references' statements, medical assessments, and military reports remained as originally written. Also, two experienced field agents reviewed the revised cases and noted that though the cases "looked" different, there were no differences in content.

As indicated in the Introduction Chapter, the revised cases are called "high impact" and the original unmodified cases "low impact."

C. DESCRIPTION OF SAMPLE POPULATION

Forty senior adjudicators (GS 11 through GS 13) from four major central adjudication sites participated in the study. Adjudication supervisors at each site chose the adjudicators to be tested. Once again, the breakdown of adjudicators from each site is listed below:

- Army Central Adjudication Facility (12)
- Navy Central Adjudication Facility (12)
- Air Force Security Clearance Office (AFSCO) (4)
- Directorate for Industrial Security Clearance Review (DISCR) at Columbus (12)

A high caseload backup prevented AFSCO from allowing more adjudicators to participate the study.

A total of 31 female and 9 male adjudicators read the cases. Average age was 45, and average years of adjudication experience was 13. The typical adjudicator had spent slightly more than 6 years at the adjudication site.

D. TESTING PROCEDURES

The adjudicators were tested on site. At each site they were divided randomly into two groups, with each group adjudicating two cases.

- Group I (six adjudicators at each site except for AFSCO) received a revised, high impact treatment of the Czarnek case and an original, low impact treatment of the Rokitka case.
- Group II received a low impact treatment of the Czarnek case and a high impact treatment of the Rokitka case.

A counterbalanced 2 X 2 design was used to ensure that each adjudicator responded to a different case written in the typical, low-impact style and the revised high-impact style and that order of presentation would not influence results.

At each adjudication site, the adjudicators assessed the cases in a large room. To guarantee that all adjudicators were given the same instructions, the researcher read a prepared script that explained the purpose of the exercise, the materials they were receiving, and process they were to use in assessing the cases and completing the questionnaires.

E. CONTENT OF QUESTIONNAIRE

Adjudicators were asked to complete a questionnaire after adjudicating each case. The first questionnaire contained three parts:

- Part I contained seven open-ended questions, requesting information about the adjudication decision, the rationale for the decision, the adjudication criteria applied, the mitigating criteria applied, the need for more information, and the perceived need to send a Letter of Intent (LOI).

- Part II contained 23 questions about the readability of the case, the ease in finding derogatory information, the quality of field agents' writing, and so on. A five-point bipolar scale was used to capture these perceptions. See Appendix A.

- Part III examined adjudicators' perceptions or feelings toward the field agents who wrote the ROI. Fifteen semantic differential items on a five-point scale were used to capture this data. See Appendix B.

The second questionnaire, completed after the second case was adjudicated, was identical to the first except it

contained an additional fourth part (see Appendix C) that asked adjudicators which case was easier to read, required less rereading, increased confidence in the competence of field agents, and so on. There were 8 case preference questions of this type and two yes/no questions.

This thesis focuses on the results from Part II, III, and IV of the questionnaire.

F. STATISTICAL TESTING OF QUESTIONNAIRE RESULTS

1. Software Statistical Package

The questionnaire results from the Suchan Study were recorded for analysis in statistical package called APL. This package was used to analyze the results from Part I of the questionnaire. The analysis of the remaining parts of the questionnaire were completed using the statistical package SPSS. Much care was taken when transferring the questionnaire result from APL to SPSS. The first part of the survey was re-analyzed using SPSS and compared with the previous APL results. Since the result were the same, the integrity of the data was maintained.

2. Confidence Interval

Since this is a pilot study of how document design, organization, and writing style impact upon the impressions, perceptions, and preferences of adjudicators, a 5% confidence interval was determined as significant during statistical analysis of both the high and low-impact Czarnek and Rokitka

Cases. A 10% confidence interval was deemed sufficient when the cases were analyzed independently, or the population of the adjudicators was stratified. With this in mind, the 10% confidence interval results from our analysis need to be interpreted with care.

3. Statistical Techniques

a. ANOVA's

When analyzing results of Part II and III of the questionnaire, ANOVA's were used for determining the statistical significance of the comparative data from the high-impact and low-impact reports. The dependent variables were the specific factors coded into the questions themselves, while the independent variable in all tests was the specific report writing style (i.e. high-impact or low-impact). An example of a dependent variable from Part II would be ease of reading the subject interview section.

b. Chi-Squares

When analyzing results of Part IV of the questionnaire, Chi-Squares were used for determining the statistical significance of the comparative data from respondents reading the high-impact and low-impact reports. Once again, the dependent variables were the specific factors coded into the questions themselves, while the independent variable in all tests, was the specific report writing style (i.e. high-impact or low-impact).

Of the ten questions in Part IV, eight were analyzed using this technique. Questions 6 and 8 were not of comparative nature (i.e. choosing between Case I or Case II), but were yes/no questions. Because of this yes/no design, there was no way to tie these questions to the independent variable, which was the effect of the writing style.

G. ORGANIZATION OF ANALYSIS

The analysis of each part of the questionnaire was to determine the statistical significance between the question responses for the high-impact versus the low-impact ROI's. The key difference throughout the analysis was the stratification of the adjudicator population and/or the specific case treatment analyzed. This breakdown is as follows:

- **Both Cases:** The high/low impact Czarnek and Rokitka high/low-impact cases were analyzed using the entire population of adjudicators.
- **Czarnek Cases:** The high/low-impact Czarnek cases were analyzed using the entire population of adjudicators.
- **Rokitka Cases:** The high/low-impact Rokitka cases were analyzed using the entire population of adjudicators.
- **Army Adjudication Site:** The high/low impact Czarnek and Rokitka high/low-impact cases were analyzed using the result from just the Army population of adjudicators.
- **Navy Adjudication Site:** The high/low impact Czarnek and Rokitka high/low-impact cases were analyzed using the result from just the Navy population of adjudicators.
- **DISCR Adjudication Site:** The high/low impact Czarnek and Rokitka high/low-impact cases were analyzed using the result from just the DISCR population of adjudicators.

- **Demographic Breakdown:** The high/low impact Czarnek and Rokitka high/low-impact cases were analyzed using a demographic breakdown of the adjudicator population. A more detailed description of the demographic breakdown is given below.

H. DESCRIPTION OF DEMOGRAPHIC BREAKDOWN

The questionnaires were analyzed using a demographic breakdown of the adjudicator population. The following four demographic categories were used for this analysis:

- **Age:** The first demographic category was age, young and old. Young was considered below one standard deviation from the mean adjudicator age, while old was everyone else. The mean age of adjudicators was 44.2 years, one standard deviation was 10.4 years, so the cut-off for the young category, was 33.8 years old. Under this criteria, three (3) adjudicators were fell into the young category, while (36) fell into the old.

- **Sex:** The second category was sex, male and female. The sexual breakdown was nine (9) male to (31) female adjudicators.

- **Grade Level:** The third category was grade level. The population was stratified between GS-11 versus GS-12 and GS-13 adjudicators. Under this criteria, nine (9) fell into the GS-11 category, (28) into the GS-12 and GS-13 category, and three (3) adjudicators not listing their grade level on the questionnaire.

- **Years in Security Administration Service:** The final category was the number of years of service that a adjudicator had worked in security administration. The population was stratified between three years or less experience, versus greater that three years experience. Under this criteria, three (3) adjudicator fell into the prior category and (37) into the latter.

I. LIMITATIONS

The sample size of some of the adjudicator population breakdowns limited the strength of the analysis. Specifically, the cell sizes were (n=6) when we compared case treatment and decision type within adjudication sites, and as small as (n=3) for two demographic population breakdowns. Consequently, the data in these report sections must be interpreted with care.

Also, Suchan's Study tested the adjudicators in a quiet room, free from distractions. This environment does not replicate actual workplace conditions. Adjudicators work in busy offices where numerous distractions and frequent interruptions can make reading long ROI's difficult. Because of this atypical testing environment, the questionnaires results do not capture all of the high-impact style's possible reading ease and information retention advantages.

IV. PRESENTATION AND ANALYSIS OF ADJUDICATION TIMES AND THE ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

This chapter analyzes both the times adjudicators required to assess the high and low-impact cases as well as their responses to Questionnaire Part II (see Appendix A). The chapter is organized in three sections; the first two sections present and analyze the adjudication times and Questionnaire Part II respectively, while the final section draws conclusions.

A. PRESENTATION AND ANALYSIS OF THE TIME REQUIRED TO ADJUDICATE BOTH THE HIGH AND LOW-CASES

These results indicate that there was no statistically significant differences between the time required to adjudicate the high-impact Czarnek and Rokitka cases versus their low-impact counterparts. The mean times to adjudicate both the high and low-impact cases are 18.33 and 20.08 minutes respectively. The corresponding standard deviations are 6.51 and 8.54 minutes. The resulting value of the F-statistic is 1.046, which shows a significance of 31%. This significance level is well outside of the 5-10% criteria.

The analysis results from the Czarnek and Rokitka cases, each adjudication site, and most of the demographic breakdowns, also produced no statistically significant

differences, with one exception: the male adjudicator population.

The male adjudicator results, however, indicate that there was a statistically significant difference between the time they required to adjudicate the high-impact Czarnek and Rokitka cases versus their low-impact counterparts. The mean times to adjudicate both the high and low-impact cases are 13.5 and 21.75 minutes respectively. The corresponding standard deviations are 1.91 and 12.2 minutes. The resulting value of the F-statistic is 3.98, which shows a significance of 6.6% and satisfies the 10% confidence criteria.

Overall, adjudication testing time results indicate that the high-impact design, organization and writing style does not significantly decrease the time required to adjudicate cases.

B. PRESENTATION AND ANALYSIS OF QUESTIONNAIRE PART II RESULTS

This section of the chapter presents and analysis the result to the questionnaire which tested the adjudicators' impressions of case information.

As stated in the first and third chapter, Questionnaire Part II tests adjudicators' impression concerning case information. Each of the twenty-three questions in this part of the survey asked adjudicators to rate a specific aspect concerning the presentation of case information such as its readability and the ease of finding derogatory information.

A five-point bipolar scale was used to capture results. Specifically, this part of the survey was designed to determine if there were significant differences between the response to the questions for the high and low-impact cases.

The first subsection gives direction on how to read the tables of results, and the last draws conclusions. The remaining middle subsections are organized as follows:

- **Both Cases**: Analysis of both Czarnek and Rokitka high/low impact cases using entire adjudicator population.
- **Czarnek Cases**: Analysis of Czarnek high/low impact cases using entire adjudicator population.
- **Rokitka Cases**: Analysis of Rokitka high/low impact cases using entire adjudicator population.
- **Separate Adjudication sites**: Analysis of each Adjudication site (Army, Navy, and DISCR) using both cases.
- **Male Adjudicators**: Analysis of both cases using Male Adjudicators.

1. Directions for reading tables of results

There are seven tables of results in this chapter. Each table has a title block and seven columns of information. Below is an extract of the title block and column heading with an explanation of each.

SUMMARY OF QUESTIONNAIRE PART II RESULTS **CASES AND ADJUDICATORS TESTED (n = sample size)** ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION						
QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F

The title block is the same for all tables with the exception of the second line, which is highlighted above. This line states which cases and adjudicators were included for the analysis. An explanation of the seven columns headings are as follows:

- **QUEST #**: The Part II question number analyzed.
- **HI MEAN**: The mean score on a five point bipolar scale for the high-impact cases.
- **HI S.D.**: The standard deviation of the high-impact score.
- **LI MEAN**: The mean score on a five point bipolar scale for the low-impact cases.
- **LI S.D.**: The standard deviation of the low-impact score.
- **F-STAT**: The value of the F Statistic resulting from the ANOVA testing.
- **SIG. of F**: The significance of the F Statistic, which is the probability that the resulting F value is the due to a random occurrence.

The results of questions which fall within the 5% confidence interval are shaded while the result that meet the 10% interval are highlighted in bold type.

2. The Analysis of both the Czarnek and Rokitka Case Results

The first primary research question, outlined in the first chapter, asks

- Will there be statistically significant differences between adjudicators' impressions of their ability to process case information presented in a high-impact ROI versus a low-impact one?

The answer to that question is given in **Table 4-1.** Out of the

results to twenty-three questions, thirteen were significant within 5% while another four were significant within 10%. Those questions that met the 5% criteria will be presented in the following subsections.

a. Questions Statistically Significant Within the 5% Confidence Interval

(1) Question 1: Coverage of Issues

This question asks to what extent does the case provide good to poor coverage of issues to enable the adjudicator to make a high quality adjudication decision. The mean score for the high-impact cases (1.9) falls just to the left of the somewhat good rating, while the mean score (2.4) for the low-impact cases lies between the somewhat good and neutral rating. These results indicate that adjudicators feel that the high-impact style provides more thorough coverage of the case issues than the low impact style.

Since each case contained the same content, the design, organization, and style of the high-impact ROI affected adjudicators' perception of the document's thoroughness.

(2) Question 2: Presentation of Derogatory Information

This question asks if the way a field agent presents derogatory information in a case makes it easy or difficult to apply the adjudication criteria to that

TABLE 4-1

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF BOTH CZARNEK & ROKITKA CASES (n = 40)
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.9	1.02	2.4	1.01	4.57	0.036
2	1.95	1.15	2.46	1	4.87	0.031
3	1.93	1.07	2.35	0.89	3.78	0.055
4	1.38	0.77	1.65	0.86	3.03	0.086
5	1.73	0.93	2.18	1.06	4.15	0.045
6	2.05	1.17	2.58	1.03	4.36	0.04
7	2.03	1.21	2.63	1.17	6.68	0.012
8	1.93	0.97	2.5	0.91	7.98	0.006
9	3.4	1.54	3.5	1.06	0.081	0.777
10	2.55	1.28	2.85	1	2.01	0.16
11	1.9	1.08	2.5	1.11	5.91	0.017
12	1.83	0.96	2.33	0.94	5.44	0.022
13	2.23	1.39	2.58	1.17	1.47	0.229
14	1.9	1.1	2.5	1.2	5.37	0.023
15	1.78	1.02	2.3	1.16	4.54	0.036
16	1.8	1.02	2.48	1.15	7.5	0.008
17	3.55	1.11	3.38	1.13	1.21	0.275
18	3.88	1.07	3.45	1.11	3.01	0.087
19	2.05	1.11	2.6	1.3	4.11	0.046
20	3.53	1.04	3.18	1.11	2.08	0.153
21	4.68	0.66	4.48	0.78	1.57	0.214
22	4.38	0.95	3.78	1.25	5.79	0.019
23	3.7	1.44	3.1	1.55	3.26	0.075

information. The mean score for the high-impact cases (1.95) lies just to the left of the somewhat easy rating, while the low-impact scores (2.46) falls between the somewhat easy and neutral rating. The results show that the high-impact style makes it easier to apply the adjudication criteria.

(3) Questions 5, 6, and 7: Perception of Field Agents Awareness

Questions 5, 6 and 7 gauge the adjudicators' perception of field agents' awareness of their needs. Specifically, the questions asked the adjudicators, based on the way information was presented in the cases, did they feel the field agent seemed to be aware or unaware of the following:

- Question 5: The information needed to make a high quality adjudication decision;
- Question 6: How to make the case easier to read;
- Question 7: The large amounts of daily reading done by the adjudicators.

The high-impact cases mean scores are 1.73 for question 5, 2.05 for question 6, and 2.03 for question 7. These scores all fall within the area of the "somewhat aware" rating category. In contrast, the low-impact cases mean scores are 2.18 for question 5, 2.58 for question 6, and 2.63 for question 7. These results lie between the somewhat aware and neutral rating categories.

Although the adjudicators perception of the field agents who wrote the cases are tested much more thoroughly in Questionnaire Part III, the results of these three questions point out that document design, organization and writing style do affect readers' perception of the writer's awareness. The author of a high-impact style document is perceived as having a greater awareness of the reader's needs than the author of a low-impact one.

(4) Question 8: Evaluation of Narrative Report Writers

Question 8 asked adjudicators if they believed that the field agents who wrote the narrative reports for the cases were good or poor writers. The high-impact mean score (1.93) falls just to the left of the somewhat good rating, while the low-impact score (2.5) lies exactly in the middle of the somewhat good to neutral rating. The result to this question showed the greatest statistical significance. They are significant at the .6% confidence level. These results show that the majority of adjudicators believe that the authors of the high impact narrative reports are better writers than the authors of low impact reports.

(5) Question 11, and 12: Ease of Finding and Reading Derogatory Information

Questions 11 and 12 tested the ease of finding and reading derogatory information in the cases. The high-

impact mean scores are 1.9 for question 11 and 1.83 for question 12, which both fall to the left of the somewhat easy rating. The low-impact mean scores are 2.5 for question 11 and 2.33 for question 12, which both fall between the somewhat easy to neutral rating.

These results indicate that adjudicators found the high-impact style cases made finding and reading information easier. Some of the specific characteristic of a high-impact document that make finding and reading information easier include the use of

- heading and subheadings
- lists and bullets
- internal previews
- active verbs
- and explicit transitional tags.

The results show that these and other high-impact stylistic strategies created the perception that finding and reading derogatory information was easier.

(6) Questions 14, 16, and 19: Ease of Remembering, Locating and Following Presented Case Information

These questions asked the adjudicators the relative ease they had in the following areas:

- Question 14: remembering the presented case information,
- Question 16: locating the essential information necessary for the efficient adjudication of the case.

- Question 19: following the chronological sequence of events in the case.

The high-impact cases mean scores are 1.9 for question 14, 1.8 for question 16, and 2.05 for question 19. These scores all fall in the area of the somewhat easy rating category. The low-impact cases mean scores are 2.5 for question 14, 2.48 for question 16, and 2.6 for question 19. These results cluster between the somewhat easy and neutral rating categories.

The results show that adjudicators feel that information presented in a high-impact style is easier to remember and locate than information presented in low impact style. They also indicate that the high-impact style makes it easier to follow chronological sequences of events. This can be interrupted to mean that the high impact style increases information retention in short term memory, improves efficiency in locating essential information in the document, as well as improve their ability to follow a sequence of events.

(7) Question 15: Ease of Adjudicating Case

The adjudicators were asked in this question whether they found it easy or difficult to adjudicate the case. The high-impact mean score (1.78) falls just to the left of the somewhat easy rating, while the low-impact score (2.3) lies between the somewhat easy to neutral rating.

The result amplifies the finding to questions 14, 16, and 19. Ease in locating and remembering essential

case information, and following chronological events should leads to the easier adjudication of cases.

(8) Question 22: Fatigue of Reading

Question 22 asked the adjudicators whether they agreed or disagreed with the statement "Reading this case tired me out." The high-impact mean score (4.38) falls between the somewhat disagree and disagree rating categories, while the low-impact score (3.78) lies between the neutral rating and the somewhat disagree ratings.

The above results indicate that the high-impact cases caused less fatigue than the low-impact ones. The high-impact document factors that may contribute to this decreased fatigue, include the use of headings and subheadings, as well as bullets and lists.

b. Questions Statistically Significant within the 10% Confidence Interval

Although the results to questions 3, 4, 18, and 23, did not meet the 5% criteria, they did show significance within the 10% confidence interval. Questions 3 and 4 tested the adjudicators confidence in the quality of the field agents' investigation and the soundness of their adjudication decision. The frequency of rereading sentences was the objective of question 18, while eye strain was the factor tested for in question 23.

The high-impact cases mean scores are 1.93 for question 3, 1.38 for question 4, 3.88 for question 18, and 3.7 for question 23. The high-impact scores for both questions 3 and 4, fall between confident and somewhat confident rating category, question 18 scores lie between the somewhat never to never rating, and question 23 scores fall between the somewhat disagree to disagree ratings.

The low-impact cases mean scores are 2.35 for question 3, 1.65 for question 4, 3.45 for question 18, and 3.1 for question 23. The low-impact scores for questions 3 fall between the somewhat confident and neutral rating category, question 4 falls between the confident and somewhat confident ratings, question 18 scores lie between the somewhat never to never rating, and question 23 scores fall between the somewhat disagree to disagree ratings.

In all of the above questions, it is inferred that the design, organization, writing style of the high-impact cases increased 1) the confidence in the field agent's investigation and adjudicators' decision, 2) reduced the frequency of sentence rereading, and 3) reduced eye strain.

c. Summary of Both the Czarnek and Rokitka Case Results

When we combine the results of the thirteen questions that passed the 5% confidence test, and the four

that passed the 10% test, it is clear that adjudicators feel that the document design, organization, and writing style of the high-impact cases to be superior to the currently used low-impact style cases. As will be seen in the following sections, this result is not necessarily true when the Czarnek and Rokitka cases or the adjudications sites are analyzed separately.

3. Analysis of the High and Low-Impact Czarnek Cases

The results of the analysis of the high and low-impact Czarnek cases are presented in **Table 4-2**. Out of the twenty-three questions analyzed, none of the results fell within the 5% confidence interval and only four (#'s 2, 8, 16, and 22) met the 10% confidence criteria. The following is a summary of each of the four questions:

- Question 2: How easy was it to applying the adjudication criteria to the case information?
- Question 8: What was the quality (good to poor) of the narrative report writers?
- Question 16: How easy was it to locate essential case information?
- Question 22: Was reading the case tiring?

Comparing the result to these questions with those from the analysis of both cases, we see consistent findings. That means that the above statistically significant questions were also found significant within either the 5% or 10% interval in the combined Czarnek and Rokitka analysis (**Table 4-1**)

TABLE 4-2

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF THE CZARNEK CASE (n = 20)
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	2.21	1.08	2.65	0.88	1.59	0.216
2	**2.16**	**1.17**	**2.74**	**0.93**	**3.21**	**0.082**
3	2.15	1.34	2.6	0.88	1.89	0.178
4	1.5	1	1.8	1.01	1.46	0.235
5	1.95	1.05	2.3	1.08	1.09	0.304
6	2.16	1.17	2.5	0.76	1.19	0.283
7	2.2	1.32	2.65	1.09	2.71	0.108
8	**1.95**	**1.05**	**2.45**	**0.69**	**3.87**	**0.057**
9	3.65	1.42	3.55	0.89	0.12	0.728
10	2.75	1.25	3.05	0.76	1.78	0.19
11	2.05	1.32	2.45	1	1.17	0.286
12	1.95	1.15	2.35	0.99	1.4	0.244
13	2.15	1.39	2.8	1.2	2.52	0.121
14	2.1	1.29	2.45	1	0.92	0.344
15	1.9	1.17	2.4	1.19	1.81	0.187
16	**1.8**	**1.15**	**2.45**	**1.05**	**3.48**	**0.07**
17	3.3	1.08	3.35	0.99	0.023	0.879
18	3.85	0.99	3.6	0.82	0.758	0.39
19	2.25	1.16	2.55	1.32	0.583	0.45
20	3.6	1.04	3.15	1.09	1.78	0.191
21	4.7	0.57	4.7	0.57	0	1
22	**4.55**	**0.76**	**3.9**	**1.25**	**3.94**	**0.054**
23	3.4	1.54	2.85	1.6	1.23	0.274

Given that there were only four statistically significant questions overall, and all of these fell only within the 10% interval, these results tell us that there was not a strong difference in adjudicators' impressions of the high and low-impact Czarnek cases. It can be further inferred that Czarnek results are not the driving force behind the large amount of statistical significance found when both the Czarnek and Rokitka Cases were analyzed together. This is counter-intuitive to expected results, because the Czarnek case content is more complicated and longer than Rokitka case content. Common sense would dictate that the longer and more complicated a document's content is, the more helpful the high-impact style would be in reading, finding and locating information.

4. Analysis of the High and Low-Impact Rokitka Cases

The results of the high and low-impact Rokitka case data are presented in **Table 4-3**. Questions 8, 12, 14, and 19were found to be statistically significant within the 5% interval while questions 1, 5, 6, 7, 11, 15, and 16 were significant within the 10% interval. The following is a summary of each of the four questions that met the 5% confidence criteria:

- Question 8: What was the quality (good to poor) of the narrative report writers?
- Question 12: How easy was it to read the derogatory case information?

TABLE 4-3

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF THE ROKITKA CASE (n = 20)
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.6	0.88	2.15	1.09	3.08	0.087
2	1.75	1.12	2.2	1.01	1.79	0.189
3	1.7	0.98	2.1	0.85	1.9	0.176
4	1.25	0.44	1.5	0.69	1.86	0.18
5	1.5	0.76	2.05	1.05	3.6	0.065
6	1.95	1.19	2.65	1.27	3.24	0.08
7	1.85	1.09	2.6	1.27	4.01	0.053
8	1.9	0.9	2.55	1.1	4.14	0.049
9	3.15	1.66	3.45	1.23	0.42	0.521
10	2.35	1.31	2.65	1.18	0.58	0.452
11	1.75	0.79	2.55	1.23	5.98	0.091
12	1.7	0.73	2.3	0.92	5.18	0.029
13	2.3	1.42	2.34	1.14	0.015	0.903
14	1.7	0.86	2.55	1.4	5.37	0.026
15	1.65	0.88	2.2	1.15	2.89	0.097
16	1.8	0.89	2.5	1.28	4.03	0.052
17	3.8	1.11	3.2	1.28	2.52	0.121
18	3.9	1.17	3.3	1.34	2.28	0.139
19	1.85	1.04	2.65	1.31	4.58	0.039
20	3.45	1.05	3.2	1.15	0.515	0.478
21	4.65	0.74	4.25	0.91	2.31	0.137
22	4.2	1.11	3.65	1.27	2.14	0.152
23	4	1.3	3.35	1.5	2.15	0.15

- Question 14: How easy was it to remember case information?
- Question 19: How easy was it to follow chronological events in the case?

Questions meeting the 10% criteria asked the following: question 1, the coverage of issues in the case; question 5 and 7, the field agents' awareness of the adjudicators' information needs and daily reading requirements; question 6, the field agents ability of make the case easier to read; and finally, Questions 11, 15 and 16: the ease in locating derogatory and essential information as well as adjudicating the case.

Comparing the result to these questions with those from the analysis of both cases, we see consistent findings. In other words, the statistically significant response to questions listed above were also found significant within either the 5% or 10% confidence interval in the combined Czarnek and Rokitka analysis (**Table 4-1**).

Comparing Rokitka case results to the Czarnek (**Table 4-3**) shows that the document design, organization, and writing style of the Rokitka cases had a greater statistical significance on the adjudicator's impressions of both the high and low-impact writing style than the Czarnek Cases. This comparison makes clear that the Rokitka cases are the driving force behind the statistically significant results of the analysis of both cases.

5. Analysis of the Separate Adjudication Sites using both the High and Low-impact Czarnek and Rokitka Cases

This section presents and analyzes the separate adjudication site results. There are three subsections in this section; each subsection presents and analyzes the result for the Army, Navy or DISCR sites respectively.

a. Presentation and Analysis of the Army Adjudication Site Results

Results from the Army Adjudication Site produced more statistically significant results than the Navy and DISCR Sites combined. **Table 4-4** shows that the results to three questions (#'s 1, 4, and 12) were significant within the 5% confidence interval, while five (#'s 6, 8, 10, 14, and 20) were within 10%. The following is a summary of each of the three questions that met the 5% confidence interval criteria.

- Question 1: What was the quality (good to poor) of the coverage of issues in the case?
- Question 4: How confident was your adjudication decision?
- Question 12: How easy was it to read the derogatory case information?

Questions meeting the 10% criteria asked about the following: question 6, the field agents' ability of make the case easier to read; question 8, the quality of narrative report writer; question 10, the perceived speed of reading the case; questions 14, the ease of remembering derogatory information

TABLE 4-4

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF ARMY SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.82	0.75	2.58	0.9	4.61	0.045
2	2.08	1.08	2.58	1	1.58	0.224
3	2.08	1.08	2.67	0.89	2.33	0.144
4	1.33	0.65	1.92	1	4.65	0.044
5	1.83	0.83	2.25	1.14	1.47	0.24
6	**1.9**	**0.94**	**2.58**	**0.9**	**2.98**	**0.1**
7	2.08	1.31	2.5	0.9	2.7	0.117
8	**1.92**	**0.79**	**2.42**	**0.67**	**3.79**	**0.066**
9	3.42	1.44	3.5	0.8	0.006	0.94
10	**2.5**	**1.24**	**2.92**	**0.67**	**3.05**	**0.097**
11	2.17	1.11	2.67	0.78	1.58	0.223
12	1.83	0.83	2.58	0.79	4.77	0.041
13	2.17	1.11	2.67	1.07	1.2	0.286
14	**1.92**	**0.9**	**2.67**	**1.23**	**3.29**	**0.085**
15	1.83	0.94	2.33	1.07	1.55	0.227
16	2	1.04	2.5	0.9	1.48	0.239
17	3.42	1	3.08	1.38	0.43	0.517
18	3.75	0.97	3.42	1.24	0.5	0.485
19	1.92	0.9	2.5	1.31	1.6	0.22
20	**3.67**	**0.78**	**3**	**0.85**	**3.72**	**0.068**
21	4.67	0.65	4.33	0.78	1.38	0.254
22	4.33	0.78	3.83	1.11	1.7	0.207
23	3.83	1.47	3.25	1.42	0.953	0.341

in the case; and finally, question 20, the frequency of underlining or note taking.

Comparing the above results with those from the analysis of both cases using the entire adjudicator population, we see three key differences. The first two are that the results of both question 10 and 20 were found to be statistically insignificant when both cases were analyzed. The third difference is that the result to Question 4 fell within the 5% confidence interval for this site but was only at the 10% level in **Table 4-1.**

All other statistically significant results from the Army sites are consistent with the combine case analysis. That means that excluding the above exceptions, all questions found significant within either the 5% or 10% confidence interval were also significant in the combined Czarnek and Rokitka analysis (**Table 4-1**).

We also found that there were several question that fell within the insignificant range in the Army analysis but significant in the analysis of both cases. These results may be caused by the smaller sample size of the Army Adjudicator test population.

We are uncertain why the Army site has both an abundance of significant results, and notable statistical inconsistences with the results of the combined Czarnek and Rokitka cases.

b. Presentation and Analysis of the Navy Adjudication Site Results

The results of the Navy site analysis are presented in **Table 4-5**. Only the result to question #2 was statistically significant within the 5% confidence interval, and four (#'s 1, 7, 8, and 16) were within the 10% interval. Question 2 asked adjudicators if they felt it was easy or difficult to apply the adjudication criteria. The questions meeting the 10% criteria asked the following: question 1, the coverage of issues in the case; question 7, the field agents awareness of the adjudicators' daily reading requirement; question 8, the quality of narrative report writer; and finally, Questions 16, the ease in locating essential case information.

Comparing the above results with those from the analysis of both cases using the entire adjudicator population we find the results are mostly consistent. The only exceptions are that there are fewer statistically significant result in the Navy Site analysis, and questions 1,7, 8 and 16 fell within the 10% criteria at the Navy Site but, were at the 5% level when treatment of both cases were combined.

c. Presentation and Analysis of the DISCR Adjudication Site Results

The result of the DISCR site analysis are presented in **Table 4-6**. This site produced the least amount of

TABLE 4-5

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF NAVY SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	**1.92**	**0.79**	**2.67**	**1.23**	**4.14**	**0.056**
2	**1.75**	**0.87**	**2.64**	**0.92**	**6.11**	**0.023**
3	1.92	0.9	2.42	0.9	2.85	0.108
4	1.33	0.49	1.33	0.49	0.013	0.912
5	1.83	0.72	2.42	1.08	2.67	0.119
6	2.25	1.05	2.67	0.89	1.1	0.305
7	**2.33**	**1.07**	**3.25**	**1.36**	**3.1**	**0.093**
8	**2**	**0.85**	**2.67**	**0.89**	**3.27**	**0.086**
9	3.42	1.56	3.5	1	0.023	0.882
10	2.58	1.16	2.92	1	0.548	0.468
11	2	1.04	2.5	1.31	0.989	0.332
12	1.83	0.83	2.17	1.03	0.708	0.412
13	2.33	1.5	2.42	0.79	0.027	0.872
14	1.83	0.94	2.58	1.24	2.55	0.126
15	1.67	0.78	2.42	1.31	2.68	0.117
16	**1.75**	**0.62**	**2.58**	**1.38**	**3.33**	**0.083**
17	3.67	1.07	3.08	0.89	0.635	0.435
18	3.92	1.08	3.42	0.9	0.954	0.34
19	1.83	1.11	3.25	1.44	1.96	0.177
20	2.58	1.05	3.33	1.15	0.033	0.858
21	4.42	0.9	4.58	0.67	0.256	0.618
22	4.25	0.96	4.08	1.08	0.159	0.695
23	3.5	1.31	3.33	1.56	0.079	0.782

TABLE 4-6

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF DISCR SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.75	1.36	2.08	0.9	0.24	0.63
2	2	1.55	2.33	1.15	0.282	0.602
3	1.67	1.23	12.17	0.94	0.78	0.389
4	1.33	1.15	1.67	0.98	0.358	0.556
5	1.5	1.24	1.92	1.16	0.438	0.516
6	2	1.48	2.5	1.38	0.422	0.422
7	1.75	1.36	2.25	1.22	0.826	0.374
8	1.75	1.22	2.5	1.24	2.056	0.167
9	3.5	1.73	3.92	1.24	0.475	0.498
10	2.33	1.44	2.67	1.37	0.31	0.584
11	1.58	1.16	2.42	1.38	2.34	0.142
12	1.75	1.22	2.25	1.14	0.989	0.332
13	2.17	1.64	2.58	1.51	0.41	0.529
14	1.83	1.4	2.42	1.31	1.02	0.325
15	1.67	1.37	2.25	1.29	1.05	0.317
16	1.67	1.23	2.42	1.38	1.8	0.195
17	3.75	1.22	3.42	1.31	0.408	0.532
18	2.25	0.97	3.58	1.31	1.88	0.185
19	2.33	1.37	2.67	1.37	0.328	0.573
20	3.5	1.31	3.17	1.4	0.357	0.557
21	4.92	0.29	4.67	0.89	0.918	0.349
22	**4.67**	**0.65**	**3.42**	**1.62**	**5.65**	**0.028**
23	**4**	**1.28**	**2.83**	**1.8**	**3.14**	**0.092**

statistically significant differences (i.e. two questions). The results to one question (#22) was statistically significant within the 5% confidence interval while the other questions (#23) fell within the 10% interval. Questions 22 and 23 asked the adjudicators if reading the case caused fatigue and eye strain respectively. Comparing the above results with those from the analysis of both cases using the entire adjudicator population, we see that the results are consistent.

We must note that the results to the other twenty-one questions were well outside of the 10% interval. From this, we can infer that there is relatively little difference in the DISCR adjudicators' impression of the case information between the two styles. This lack of difference is far greater than results from either the Army or Navy Adjudication Sites.

6. Presentation and Analysis of the Male Adjudicator Results

As described in the third chapter, an analysis of several demographic breakdowns of the adjudicator population was performed. Similar to the results found in the analysis of the adjudicating times, the only group to produce a large amount of statistically significantly results was the male adjudicators.

A presentation of these results are in **Table 4-7**. The results to nine questions (#'s 1, 2, 3, 6, 7, 11, 14, 15, 16, and 18) were found to be statistically significant within 5%, and five question (#'s 5, 8, 12, 17, and 19) within 10%. The following is a summary of the nine question that met the 5% confidence interval criteria:

- Question 1: What was the quality (good to poor) of the coverage of issues in the case?
- Question 2: How easy was it to apply the adjudication criteria to the case information?
- Question 3: How confident were you in the quality of the field agent's investigation?
- Question 6: How aware were field agents in making the case easier to read?
- Question 7: How aware was the field agent to the adjudicator daily reading requirement?
- Question 11: How easy was it to find derogatory information?
- Question 14: How easy was it to remember derogatory information?
- Question 15: How easy was it to adjudicate the case?
- Question 16: How easy was it to locate essential case information?
- Question 18: How often were sentences reread?

The questions meeting the 10% criteria asked the following: question 5, the field agents awareness of the adjudicators information needs; question 8, the quality of narrative report writer; questions 12, the ease of reading derogatory information in the case; question 17, the frequency of reading

TABLE 4-7

SUMMARY OF QUESTIONNAIRE PART II RESULTS
ANALYSIS OF MALE ADJUDICATORS (n = 9) USING BOTH CASES
ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION

QUEST #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.44	0.53	2.55	1.01	7.38	0.017
2	1.55	0.53	3	1.12	10.57	0.006
3	1.33	0.5	2.55	1.01	9.19	0.009
4	1.22	0.44	1.67	1	1.41	0.254
5	1.44	0.73	2.67	1.41	4.5	0.052
6	1.66	0.5	3	1.12	11.59	0.004
7	1.89	0.93	3.22	1.3	6.08	0.027
8	1.89	0.78	2.78	0.97	4.46	0.053
9	3.89	1.17	3.67	1.22	0.347	0.565
10	2.22	0.83	3	1.22	2.32	0.15
11	1.66	0.5	2.89	1.17	7.72	0.015
12	1.67	0.5	2.56	1.24	4.12	0.06
13	2.11	1.36	3	1.22	2.45	0.14
14	1.78	0.83	3	1.22	5.57	0.033
15	1.55	0.73	2.89	1.27	7.87	0.014
16	1.67	0.5	3	1.12	9.61	0.008
17	3.78	1.09	2.89	1.17	4.18	0.06
18	3.89	0.78	2.89	1.17	7.62	0.015
19	1.78	0.44	2.78	1.3	4.01	0.065
20	3.22	1.39	3	1.22	0.18	0.674
21	4.89	0.33	4.78	0.44	0.41	0.53
22	4.33	0.5	4	1.32	0.71	0.413
23	4	0.71	3.11	1.69	1.78	0.203

section in the case; and finally, question 19, the ease of following the chronological sequence of events in the case.

Comparing the above results with those from the analysis of both cases using the entire adjudicator population, we once again see that the results are consistent. These results, however, are quite surprising considering the small sample size (n=9) of male adjudicators.

C. CHAPTER CONCLUSION

The results from the high and low-impact treatment of both the Czarnek and Rokitka cases point out that there is no statistical evidence to show that the high-impact decreases adjudication time. Conversely, there is evidence that adjudicators feel that the high-impact style is an improvement over the low-impact one. Specifically, they believe that the high-impact style

- provides better coverage of issues;
- makes it easier to apply adjudication criteria to the case information;
- makes the field agent who wrote the case seem more aware of 1) how to make the case easier to read; 2) their informational needs; 3) the extensive amount of their daily reading;
- makes the field agent seem like a better writer;
- makes the derogatory information in the narrative report easier to find, read, remember and adjudicate;
- makes following the chronological sequence of events in the case easier to follow;
- and causes less fatigue while reading.

To a lesser degree adjudicators believe that the high-impact style makes them more confident in the soundness and quality of their adjudication decision, causes them to reread sentences less often, and produces less eye stain.

We also found that there were greater statistically significant differences in the adjudicators impressions of the case information in the Rokitka cases than the Czarnek cases. This is contrary to expected results because the Czarnek case content is more complicated and longer than Rokitka case content. One would expect that the longer and more complicated a documents content is the more helpful the high-impact style would be in reading, finding, and locating information.

When the analysis was divided by adjudication site, the statistical significance was not nearly as great as the result from the entire population. However, this could be attributed to the smaller sample sizes used. The greatest statistical differences were found from the analysis of the Army adjudication site data. The Navy adjudication site data produced the second most statistically significant result, while DISCR data had the least.

The most surprising result was found when analyzing the demographic breakdown of adjudicators. The male adjudicators found that the high-impact style decreased the time required to adjudicate a case. They also felt that the high-impact

cases were a much greater improvement over the current low-impact cases than their female counterpart.

V. PRESENTATION AND ANALYSIS OF PART III RESULTS: THE ADJUDICATOR'S PERCEPTION OF THE FIELD AGENT

Questionnaire Part III (see Appendix B) tests adjudicators' perception of or feeling towards the field agents who wrote either the high-impact or low-impact ROI. This survey section asked adjudicators to rate the field agents using fifteen bipolar adjectives such as objectivity, clarity of thinking, reliability, etc.. A five-point bipolar scale was used to capture the adjudicator's feelings. Specifically, this part of the survey was designed to determine if the high or low-impact style caused differences in adjudicators' perceptions of field agents.

This chapter presents and analyzes the results to Questionnaire Part III in the same manner as the Part II results in the previous chapter. The first section of the chapter gives a very brief explanation of how to read the tables of results, and the last draws conclusion. The remaining middle sections cover the analysis results from both cases, the Czarnek cases, the Rokitka cases, the separate adjudication sites, and finally the male adjudicators.

A. DIRECTIONS FOR READING TABLES OF RESULTS

Similar to the previous chapter, there are seven tables of results in this chapter. These tables will follow the same

format as the previous tables (i.e. title block, column headings, shading of 5% results, and bolding of 10% results). The only differences are the information in the title block, the results to the specific questions, and total number of questions (15 vice 23).

B. ANALYSIS OF BOTH CZARNEK AND ROKITKA CASES

The thesis's second primary research question asks

- Will there be statistically significant differences between adjudicators' perceptions or feeling towards the field agents who wrote a high-impact ROI as compared to those who wrote the low-impact ROI?

The answer to that question is given in **Table 5-1**. Out of fifteen bipolar descriptive adjectives, only two were significant at 5% level, while four were significant at the 10% level.

1. Questions Statistically Significant Within the 5% Confidence Interval

a. Question 8: Agent Clarity of Thinking

This bipolar adjective determined whether adjudicators perceive differences in the clarity of thinking between the field agent who wrote the high or low-impact case treatments. The high-impact mean score (1.9) falls just to the left of the somewhat clear thinking rating, while the low-impact score (2.25) lies between the somewhat clear thinking and the neutral rating. The results indicate that the

TABLE 5-1

SUMMARY OF QUESTIONNAIRE PART III RESULTS ANALYSIS OF BOTH CZARNEK & ROKITKA CASES (n = 40) ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI						
QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.78	0.97	2.15	1.03	1.7	0.197
2	1.79	0.92	2.03	1	0.67	0.417
3	1.54	0.72	1.78	0.8	1.35	0.249
4	1.93	0.97	2.08	0.92	0.088	0.768
5	**1.97**	**1.12**	**2.4**	**1.1**	**2.78**	**0.1**
6	**1.98**	**1.07**	**2.33**	**0.96**	**3.29**	**0.074**
7	**1.83**	**0.84**	**2.21**	**0.89**	**3.81**	**0.055**
8	**1.9**	**0.99**	**2.25**	**0.9**	**5.02**	**0.028**
9	2	1.24	2.27	1.11	1.13	0.292
10	**1.85**	**1.01**	**2.3**	**0.94**	**4.92**	**0.03**
11	1.77	0.99	2	0.79	0.944	0.335
12	1.74	0.91	2.05	0.89	1.01	0.318
13	1.88	1.04	2.15	1.02	0.68	0.413
14	**1.74**	**0.94**	**2.23**	**1**	**3.53**	**0.064**
15	2.15	1.05	2.28	1.04	0.025	0.876

adjudicators felt the writer of the high-impact ROI is a more lucid thinker than his low-impact counterpoint. This result points out that the ROI document design, organization and writing style projects a more intelligent image of the writer, which could increase the writer's credibility with the reader.

b. Question 10: Efficiency of the Field Agent

This bipolar adjective determined whether adjudicators perceived differences in efficiency between the

field agent who wrote the high or low-impact cases. The high-impact mean score (1.85) falls just to the left of the somewhat efficient rating, while the low-impact score (2.3) lies between the somewhat efficient and the neutral rating.

The results show that adjudicators perceive the high-impact writer as more efficient than the low-impact author. This perception of efficiency could also increase the field agent's credibility with the adjudicators. In other words, the more efficient the field agent seems to the adjudicators, the less likely they will feel that the Personnel Security Investigation (PSI) was conducted in a shoddy, haphazard manner. These results also suggest that adjudicators view the document factors in the high-impact style as a more efficient means of conveying derogatory information than the low-impact style.

2. Questions Statistically Significant Within the 10% Interval

The results to the rating of the bipolar adjectives 5, 6, 7, and 14 were found to be significant within the 10% confidence interval. These bipolar adjectives determined whether the adjudicators perceived differences in the field agents in the areas of organization, precision, care, and judgement respectively.

The high and low-impact scores and their relative position on the rating scale are as follows:

- #5: The high-impact score (1.97) falls just to the left of the somewhat organized rating. The low-impact score (2.4) lies between the somewhat organized and neutral rating.

- #6: The high-impact score (1.98) falls just to the left of the somewhat precise rating. The low-impact score (2.33 lies between the somewhat precise and neutral rating.

- #7: The high-impact score (1.83) falls to the left of the somewhat careful rating. The low-impact score (2.21) lies between the somewhat careful and neutral rating. **This results shows a significance almost within the 5% confidence interval (i.e. 5.5%)**

- #14: The high-impact score (1.74) falls to the left of the at fairly sound judgment rating. The low-impact score (2.4) lies between the fairly sound judgment and neutral rating.

Although these results are not a conclusive as the findings from in the 5% interval, they indicate that the writers of high-impact ROI's are regarded as more organized, precise, careful, and possess better judgment than their low-impact counterparts.

3. Summary of Both the Czarnek and Rokitka Case Results

When we combine the results from the rating of the two bipolar adjectives that passed the 5% confidence test, and the four that passed the 10% test, it is fairly clear that adjudicators perceive the authors of the high-impact style cases to

- possess better judgment
- be more organized,
- be more precise,
- be more careful,

- be more clear thinking,
- and be more efficient,

than the writers of low-impact style cases. These perceived attributes may increase the field agents's credibility in the eyes of the adjudicators and thus produce greater confidence in the ROI case information. This increased credibility and confidence in the case information would reduce the requests for additional information concerning the case subject. Taking that argument one step further, we could say that credibility improves the efficient flow of information in the adjudication process and will thus decrease case processing time.

As will be seen in the following sections, these differences in perception are not necessarily true when the Czarnek and Rokitka cases or the adjudications sites are analyzed separately.

C. ANALYSIS OF THE HIGH AND LOW-IMPACT CZARNEK CASES

The analysis results of questionnaire Part III using just the high and low-impact Czarnek cases are presented in **Table 5-2**. The analysis of the fifteen ratings of the bipolar adjectives showed that none of the results were found to be statistically significant within either the 5% or 10% confidence intervals.

These result tells us that there was no difference in adjudicators' perception of the field agents who wrote either

TABLE 5-2

SUMMARY OF QUESTIONNAIRE PART III RESULTS ANALYSIS OF THE CZARNEK CASE ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI						
QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.85	0.93	2.3	1.03	0.846	0.364
2	1.95	1.08	2	0.97	0.03	0.863
3	1.58	0.77	1.75	0.85	0.144	0.706
4	2.1	1.07	2.1	1.07	0.308	0.582
5	2.12	1.11	2.3	0.98	0.282	0.599
6	2.1	1.21	2.35	0.81	1.287	0.264
7	1.85	0.88	2.21	0.71	1.459	0.235
8	2.16	1.12	2.25	0.85	0.706	0.407
9	2	1.26	2.2	0.95	0.172	0.681
10	1.89	1.05	2.3	0.92	1.743	0.195
11	2	1.15	2.15	0.74	0.085	0.772
12	1.95	1.03	2.11	0.88	0.021	0.885
13	2.05	1.23	2.2	0.77	0.007	0.935
14	1.89	1.1	2.25	0.97	0.843	0.365
15	2.3	1.08	2.25	0.79	0.1	0.754

the high or low-impact Czarnek cases. We can also infer that these results are not the driving force behind the statistically significant results to the bipolar ratings when both the Czarnek and Rokitka Cases were analyzed together. Similar to the Questionnaire Part II results, this lack of significant difference is unexpected because Czarnek case content is much more complicated and longer than Rokitka case

content. One would assume that writers of high-impact documents containing longer and more complicated information would be more positively perceived than writer of low-impact ones.

D. ANALYSIS OF THE HIGH AND LOW-IMPACT ROKITKA CASES

The result of Part III using just the high and low-impact Rokitka case date is presented in **Table 5-3**. Only the bipolar rating for clarity of thinking (#8) was found to be statistically significant within the 5% confidence interval. Three other bipolar ratings of organization (#5), efficiency (#10), and judgment (#14) were significant within the 10% interval.

Comparing these semantic differential results with those from our analysis of both case, we see consistent findings. The statistically significant responses described above were also found significant within either the 5% or 10% confidence interval in the combined Czarnek and Rokitka analysis (**Table 5-1**).

Unlike the Czarnek cases, we can say that the Rokitka case responses are the driving force behind the statistically significant results we found when both cases were combined.

TABLE 5-3

SUMMARY OF QUESTIONNAIRE PART III RESULTS ANALYSIS OF THE ROKITKA CASE ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI						
QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.7	1.03	2	1.03	0.851	0.362
2	1.65	0.75	2.05	1.05	1.93	0.173
3	1.5	0.69	1.8	0.77	1.693	0.201
4	1.75	0.85	2.05	0.76	1.385	0.247
5	**1.85**	**1.14**	**2.5**	**1.24**	**2.998**	**0.091**
6	1.85	0.93	2.32	1.11	2.023	0.163
7	1.8	0.83	2.2	1.06	2.352	0.134
8	**1.65**	**0.81**	**2.25**	**0.97**	**5.577**	**0.024**
9	2	1.26	2.35	1.27	1.09	0.303
10	**1.8**	**1.01**	**2.3**	**0.98**	**3.27**	**0.079**
11	1.55	0.76	1.84	0.83	1.31	0.26
12	1.55	0.76	2	0.92	1.884	0.178
13	1.7	0.8	2.1	1.25	1.089	0.303
14	**1.6**	**0.75**	**2.2**	**1.06**	**3.219**	**0.081**
15	2	1.03	2.3	1.26	0.211	0.648

E. ANALYSIS OF THE SEPARATE ADJUDICATION SITES USING BOTH THE HIGH AND LOW-IMPACT CZARNEK AND ROKITKA CASES

This section presents and analyzes the Part III results for each separate adjudication site. This section will be presented in three subsections: Army, Navy and DISCR results.

1. Presentation and Analysis of the Army Adjudication Site Results

Unlike the last chapter, the Army's questionnaire Part III results did not dominate the other sites in statistically significant results. **Table 5-4** shows that the result to the judgement bipolar rating (#14) was the only result significant to within either the 5% or 10% confidence interval. This rating was is consistent with the combined case analysis.

TABLE 5-4

SUMMARY OF QUESTIONNAIRE PART III RESULTS
ANALYSIS OF ARMY SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI

QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	2	1.04	2.17	1.03	0.149	0.703
2	2	0.85	2.33	0.89	0.889	0.357
3	1.75	0.97	2.08	1.08	0.597	0.449
4	2.25	0.75	2.33	0.98	0.052	0.823
5	2.08	0.79	2.58	0.9	2.093	0.163
6	2.17	1.03	2.5	1.17	0.986	0.333
7	2.17	0.94	2.55	0.93	0.86	0.365
8	2	0.85	2.42	1	2.25	0.15
9	2.67	1.56	2.42	1.24	0.048	0.828
10	2.33	1.07	2.42	1	0.239	0.63
11	1.83	0.94	2.25	0.97	2.05	0.168
12	1.92	0.9	2.36	0.92	1.66	0.213
13	2	0.95	2.33	1.07	1.181	0.291
14	**1.83**	**0.94**	**2.42**	**1**	**3.4**	**0.081**
15	2.08	1.08	2.42	1.08	1.014	0.327

2. Presentation and Analysis of the Navy Adjudication Site Results

The result of the Navy site analysis are presented in **Table 5-5**. Only the "precision" bipolar rating (#6) was found to be statistically significant within the 5% confidence interval. Three other bipolar ratings for clarity of thinking (#8), awareness (#9), and efficiency (#10) were within the 10% interval. Comparing these results with those from the

TABLE 5-5

SUMMARY OF QUESTIONNAIRE PART III RESULTS
ANALYSIS OF NAVY SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI

QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.67	0.78	2.17	0.72	1.005	0.329
2	1.82	0.6	1.83	0.72	0.162	0.692
3	1.55	0.52	1.83	0.58	0.722	0.407
4	1.75	0.75	2.33	0.98	0.341	0.567
5	2	0.82	2.25	0.97	0.278	0.604
6	**1.83**	**0.83**	**2.64**	**1.03**	**5.918**	**0.026**
7	1.67	0.49	2	0.74	2.033	0.172
8	**2**	**1**	**2.33**	**0.98**	**3.317**	**0.086**
9	**1.67**	**0.78**	**2.42**	**1**	**3.938**	**0.064**
10	**1.73**	**0.65**	**2.42**	**1.08**	**3.938**	**0.064**
11	1.91	0.94	2	0.77	0.103	0.752
12	1.73	0.65	2.08	0.9	0.054	0.819
13	2	1.13	2.25	1.06	0.08	0.781
14	1.83	0.72	2.33	1.15	0.095	0.761
15	2.42	1	2.75	1.06	0.006	0.937

analysis of both case, we see consistent findings, with only one exception. Question 6 was statistically significant within the 10% interval in the previous analysis, but the Navy results show it falling within the 5% interval.

3. Presentation and Analysis of the DISCR Adjudication Site Results

The DISCR results are presented in **Table 5-6**. This site produced no statistically significant results. Oddly

TABLE 5-6

SUMMARY OF QUESTIONNAIRE PART III RESULTS
ANALYSIS OF DISCR SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S PERCEPTION OF FIELD AGENT WRITING ROI

QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.67	1.15	2.08	1.44	0.367	0.552
2	1.58	1.24	1.92	1.38	0.213	0.649
3	1.33	0.49	1.42	0.67	0.046	0.833
4	1.58	1.16	1.83	0.94	0.165	0.689
5	1.82	1.6	2.33	1.5	0.628	0.438
6	1.67	1.15	2	0.74	0.667	0.424
7	1.58	0.9	2.17	1.11	1.815	0.193
8	1.67	1.15	2.08	0.9	0.969	0.337
9	1.67	1.15	2.17	1.27	0.978	0.334
10	1.5	1.17	2.08	0.9	1.788	0.196
11	1.5	1.17	1.83	0.72	0.407	0.531
12	1.5	1.17	1.83	0.94	0.338	0.568
13	1.67	1.15	1.83	1.11	0.032	0.86
14	1.55	1.21	2	0.95	0.877	0.361
15	1.92	1.16	1.75	0.86	0.383	0.543

enough, none of the results of the analysis were even close to falling within the statistically significant range indicating there is relatively little difference in DISCR adjudicators' perception of the field agents who wrote either the high or low-impact styles cases. The reason why the adjudicator's show no preference between the two case may lie in unique organizational norms at the DISCR.

F. PRESENTATION AND ANALYSIS OF THE MALE ADJUDICATOR RESULTS

Just as in the previous chapter, the analysis of the several demographic breakdowns produced no significant results except for the male adjudication population. These result are presented in **Table 5-7.** The bipolar ratings for organization (#5), clarity of thinking (#8), and efficiency (#10) were found to be statistically significant at the 5% level, while the rating for thoroughness (#1), precision (#6), care (#7), confidence (#11), and judgement (#14) were statistically significant at the 10% level.

For the most part, these results are consistent with those found in the analysis of both cases using the entire population (**Table 5-1**), with three notable exceptions. There are two additional bipolar ratings (# 1 "thoroughness" and #11 "confidence") with statistically significant results, and one question (#5 "clarity of thinking") with results of greater statistical significance (i.e. 5% vice 10%). Similar to the

TABLE 5-7

SUMMARY OF QUESTIONNAIRE PART II RESULTS ANALYSIS OF MALE ADJUDICATORS (n = 9) USING BOTH CASES ADJUDICATOR'S IMPRESSIONS OF CASE INFORMATION						
QUESTION #	HI MEAN	HI S.D.	LI MEAN	LI S.D.	F-STAT	SIG. of F
1	1.44	0.53	2.22	1.09	2.57	0.094
2	1.56	0.53	2.11	1.05	1.69	0.215
3	1.44	0.53	1.67	0.71	0.415	0.53
4	1.67	0.71	2.44	1.13	2.565	0.132
5	1.56	0.53	2.89	1.17	8.723	0.01
6	1.78	0.67	2.56	1.01	3.181	0.096
7	1.67	0.5	2.22	0.67	3.845	0.07
8	1.56	0.73	2.56	1.01	5.018	0.042
9	1.56	0.73	2.44	1.24	2.997	0.105
10	1.56	0.53	2.56	1.01	5.983	0.028
11	1.44	0.53	2.11	0.78	3.756	0.073
12	1.44	0.53	1.78	0.67	1.143	0.303
13	1.56	0.53	2.11	1.17	1.307	0.272
14	1.56	0.53	2.56	1.24	4.302	0.057
15	2	0.87	2.11	1.17	0.022	0.889

male adjudicator's result to Part II, these results are remarkable considering the small sample size (n=9).

G. CHAPTER CONCLUSION

The result to the combined Czarnek and Rokitka case analysis point out that there is statistically significant evidence to show that adjudicators have different perceptions of the field agents who wrote high-impact style cases versus

those who composed low-impact one. Specifically, they feel that the agents writing in a high-impact style possess better judgment, are better organized, and are more precise, careful, clear thinking, and efficient than writers of the low-impact cases. These perceived attributes increase field agent credibility, which could improve the efficiency of the entire adjudication process.

When the cases were analyzed independently, we found that there was 1) no significant differences in the adjudicator's perception of field agents who wrote the high or low-impact Czarnek cases; and 2) statistically significant differences in the perceptions of the high and low-impact Rokitka writers. These differences were found in the areas of organization, clarity of thinking, efficiency, and judgement.

When the analysis was broken down by adjudication site, the statistical significance was not nearly as great as the results from the entire population. This result could be attributed to the different sample sizes used in the analysis of both cases and each site (i.e. 40 versus 12 adjudicators). The greatest statistical differences was found in the results from the Navy adjudicators, with the Army coming in a distant second. DISCR came in third with no statistically significant results.

Similar to the result in the previous chapter, the most surprising result was found from the analysis of the demographic breakdown of the adjudicators. The survey

responses from the male adjudicators produced statistically significant results.

VI. PRESENTATION AND ANALYSIS OF PART IV RESULTS: THE WRITING STYLE PREFERENCES OF ADJUDICATORS

This chapter presents the results from Questionnaire Part IV (see APPENDIX C). Part IV tested the adjudicators' impressions or feeling about the high and low-impact writing styles by having them choose which case treatment they prefered in relation to eight factors. These preference factors include:

- presentation of information;
- ease of reading, remembering, and applying the adjudication criteria;
- amount of rereading;
- confidence in adjudication decision;
- competence of the field agent writing the case;
- and overall writing style.

The chapter is organized in five sections. The first subsection gives direction on how to read the tables of results and the last draws conclusions. The remaining middle subsections are organized as follows:

- **Both Cases**: Analysis of both Czarnek and Rokitka high/low impact cases using entire adjudicator population.
- **Separate Adjudication sites**: Analysis of each Adjudication site (Army, Navy, and DISCR) using both cases.
- **Male Adjudicators**: Analysis of both cases using Male Adjudicators.

A. DIRECTION FOR READING TABLES OF RESULTS

There are five tables of results in this chapter. Each table has a title block and seven columns of information. Below is an extract of the title block and column heading with an explanation of each.

SUMMARY OF QUESTIONNAIRE PART IV RESULTS **CASES AND ADJUDICATORS TESTED (n = sample size)** ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI						
QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR. STAT.
	#	(%)	#	(%)		

The title block is the same for all tables with the exception of the second line, which is highlighted above. This line states which case and adjudicators were included in the analysis. An explanation of the seven column headings are as follows:

- **QUEST #**: The Part IV question analyzed, excluding question 6 and 8.
- **PREFER HI**: The number and percentage of adjudicators who prefer the high-impact style cases relative to the tested preference factor.
- **PREFER LI**: The number and percentage of adjudicators who prefer the low-impact style cases relative to the tested preference factor.
- **CHI-SQR. STAT.**: The value of the statistic resulting from the Chi-Squared testing.
- **SIG. of CHI-SQR. STAT.**: The significance of the chi-square statistic, which is the probability that the chi-square value is due to a random occurrence.

The results of questions which fall within the 5% confidence interval are shaded while, results that meet the 10% interval are highlighted in bold type.

Questions 6 and 8 were posed in a yes/no format and could not be statistically analyzed using Chi-squares. The answer to these questions are included in the discussion of results.

B. THE ANALYSIS OF BOTH THE CZARNEK AND ROKITKA CASES RESULTS

The third primary research question, outlined in the first chapter, asks

- Will there be statistically significant differences in adjudicators' preferences for the case information presented in a high-impact versus the low-impact style?

The answer to that question is given in **Table 6-1** below:

TABLE 6-1

SUMMARY OF QUESTIONNAIRE PART IV RESULTS
ANALYSIS OF BOTH CZARNEK & ROKITKA CASES (n = 40)
ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI

QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR STAT.
	#	(%)	#	(%)		
1	29	73%	11	28%	8.29	0.004
2	27	68%	13	33%	5.01	0.025
3	27	68%	13	33%	5.23	0.022
4	9	23%	30	77%	11.3	0.001
5	27	69%	12	31%	5.91	0.015
7	6	50%	6	50%	0	1
9	17	81%	4	19%	8.42	0.004
10	27	69%	12	31%	5.91	0.015

Each of the significant results in the table, as well as the responses to yes/no questions, will be compared with either Part II or III survey results. Unless otherwise noted, only Part II or III results significant at the 5% or 10% confidence levels are used in the comparison.

1. **Question 1: Presentation of Case Information**

This question asks adjudicators which case treatment writing style they prefered. The results, statistically significant at the 1% level, show that by a 29 to 11 margin adjudicators prefer the high-impact style to the low-impact one.

These results confirm the findings from Part II of the survey. Specifically, comparing Part II high-impact and low-impact results of adjudicators' impressions of the way derogatory information is presented reveals that the high-impact style seems to

- make it easier to apply the adjudication criteria,
- increase the adjudicators' confidence in the quality of their adjudication decision,
- improve field agent awareness of adjudicators' daily reading requirements,
- and makes it easier to find and remember derogatory information.

2. **Question 2: Ease of Reading**

This question asked the adjudicators which case style was easier to read. The results, statistically significant at the 5% level, show that by a 27 to 13 margin adjudicators

found it easier to read cases in the high-impact rather than the low-impact style.

These results directly verify findings of one Part II question and indirectly corroborate the findings from two others. The directly applicable questions asked the adjudicators how easy it was to read the derogatory information, while the indirect questions determined to what extent did reading the cases caused fatigue and eye strain. The high-impact style made it easier to read derogatory information and reduced fatigue and eye strain.

3. **Question 3: Ease of Remembering Case Information**

This question asked adjudicators if information was easier to remember with the case treatments using either the high or low-impact style. The results, statistically significant at the 5% or 10% level, show that by a 27 to 13 margin adjudicators more easily remembered case information written in the high-impact style than the low-impact one.

These results confirms the finding from one Part II question. This question found that, given the way information was presented in the high and low-impact cases, adjudicators felt that it was easier to remember the case information in the high-impact style than the low-impact one.

4. **Question 4: Frequency of Rereading Case Information**

This question asked adjudicators which case style had to be read more often. The results, statistically significant

at the 1% level, show that by a 30 to 9 margin adjudicators had to reread the case information more often in the low-impact than the high-impact cases.

These results corroborate the finding from one Part II question. This question determined that adjudicators' felt they had to reread sentences more often in the low-impact style than the high-impact one.

5. **Question 5: Ease of Applying the Adjudication Criteria**

This question asked adjudicators which writing style made applying the adjudication criteria easier. The results, statistically significant at the 5% level, show that by a 27 to 12 margin adjudicators find applying the adjudication criteria easier in the high-impact style than the low one.

These results corroborate the finding from one question in Part II. The results to that question indicate that the adjudicators' impressions of the way derogatory information is presented in the high-impact style seems to make it easier to apply the adjudication criteria than in the low-impact cases.

6. **Question 6: Confidence in Adjudication Decision**

This yes/no question directly asked adjudicators if the different writing styles affected their confidence in their adjudication decision. By a 31 to 9 margin the adjudicators felt the different styles did not affect their confidence.

Much care must be used when comparing these results with the findings from related Part II questions. The key obstacle to effective comparison lies in the fact that this Part IV question directly tested Adjudicators' confidence in their adjudication decision, while the Part II questions determined only indirectly their degree of confidence. Part II determined adjudicators' relative confidence in

- the quality of the field agent's investigation,
- and the soundness of their adjudication decision.

These results indirectly indicate that the high-impact style increased adjudicators' confidence in their decision compared to the low-impact style, but the position of the mean scores show that they felt relatively confident using either style. Combining the Part II and IV results, we see that indirect testing shows that the high-impact style affects adjudicators' confidence in both the field agents' investigation and the soundness of their adjudication decision, though direct testing does not.

However, we must not ignore that 24% of the adjudicators did indicate that the different case writing styles did affect the confidence in their adjudication decision. The other 76% of adjudicators may be reluctant to say directly that any case style would affect their confidence because this would reflect poorly on their adjudicative ability.

7. Question 8 and 9: Perception of the Field Agent's Competence

Question #8 was a yes/no question that asked adjudicators if the different writing styles affected their perception of the field agents' competence. Question #9 asked only those who responded "yes" if the writer of the high-impact or the low-impact style was more competent.

Question #8 results show that one-half of the adjudicators (20) indicated writing style affected their perception of field agent competence. The fact that half of the adjudicators said that style affected their perception is fairly startling since it indicates that style alone had a major impact on perception of competence.

The competence of an individual is, however, ambiguous, and depends on the definition used. It may be a combination of all, or part of the descriptive adjectives used in Part III of the survey. This study interprets competence as the combination of the descriptive adjectives from part III that tested in the significant level.

With this in mind, a comparison of the Part IV and III results reveals a pattern that supports the finding that the high-impact style affects adjudicators' perception of field agents' competence. Specifically, Part III shows that adjudicators perceived field agents who wrote the high-impact cases to be more organized, precise, careful, clear thinking, and efficient than the writers of the low-impact cases. They

also felt that high-impact case writers possessed better judgement. The combination of these statistically significant results points out that writing style does affect adjudicators' perception of field agents' competence.

Futhermore, the results to Question #9 show that by a margin of 17 to 4 the adjudicators saying "yes" to Question #8 feel that the writers of the high-impact cases are more competent than the writer that use the low-impact style. This result also indicates that the portion of the adjudicator responding "yes" feel that high-impact style reflects a more competent writer than the currently used low-impact style.

8. **Question 10: Writing Style Preference**

This question asked adjudicators which style would they prefer all ROI's be written. The results, statistically significant at the 5% level, show that by a margin of 27 to 12 adjudicators prefer the high-impact style cases over the low-impact style ones.

This result verifies the findings of both Questionnaire Part II and III. Those survey results show that there is a statistically significant difference between the high and low-impact style cases in the adjudicators' impressions of case information and their perceptions of field agents writing the cases. Analyzed together, the result of Part II, III and IV clearly point out that the high-impact style is superior to the status quo low-impact style.

C. ANALYSIS OF THE SEPARATE ADJUDICATION SITE RESULTS

This section presents and analyzes the Part IV results for each separate adjudication site. This subsection will present qualitative discussion of the results from the three sites: Army, Navy and DISCR.

1. Presentation and Analysis of the Army Adjudication Site Results

The Army Site showed the least number of statistically significant results to Questionnaire Part IV. Those results are presented in **Table 6-2.** Question #9, which tested the positive respondents to question #8 (the Competence of field agents), was significant at the 5% level, while Question #3, which determined which case writing style produced easier to remember information, was significant at the 10% level. Although the remainder of the results are not significant, they all favor the high-impact style documents. Question #6 results indicate (4) yes and (8) no responses, while question #8 shows (5) yes and (7) no responses.

The only major significant result showed by a 9 to 3 margin that adjudicators felt information presented in the high-impact style was easier to remember than that presented in the low-impact style. Also, the 5 yes respondents to question #8 believe that the high-impact writers were more competent than the low-impact ones.

TABLE 6-2

SUMMARY OF QUESTIONNAIRE PART IV RESULTS ANALYSIS OF ARMY SITE (n = 12) USING BOTH CASES ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI						
QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR. STAT.
	#	(%)	#	(%)		
1	7	58%	5	42%	0.343	0.558
2	7	58%	5	42%	0.343	0.558
3	**9**	**75%**	**3**	**25%**	**3.09**	**0.079**
4	3	27%	8	73%	2.4	0.122
5	8	73%	3	27%	2.4	0.122
7	1	25%	3	75%	NC	NC
9	5	100%	0	0%	5	0.025
10	7	64%	4	36%	0.782	0.376

2. Presentation and Analysis of the Navy Adjudication Site Results

The Navy Site showed the most statistically significant responses to Questionnaire Part IV. Those results are presented in **Table 6-3.** They show that three questions (#'s 1, 2, and 10) were significant at the 5% confidence level, and question #2 was significant at the 10% level. The results also indicate that question #6 had only negative responses, while question #8 had (4) positive and (8) negative responses.

The major significant result showed that the adjudicators

- preferred the presentation in the high-impact style cases (#1),

- felt that the information presented in the high-impact style was easier to read (#2),
- had to reread information more often in the low-impact style cases (#4),
- and preferred that all cases be written in the high-impact style (#10).

Although the remainder of the result are not significant, they indicate that the adjudicators prefer the high-impact documents.

TABLE 6-3

SUMMARY OF QUESTIONNAIRE PART IV RESULTS
ANALYSIS OF NAVY SITE (n = 12) USING BOTH CASES
ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI

QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR. STAT.
	#	(%)	#	(%)		
1	10	83%	2	17%	6	0.014
2	9	75%	3	25%	3.09	0.079
3	8	67%	4	33%	1.5	0.221
4	1	8%	11	92%	8.5	0.003
5	8	67%	4	33%	1.5	0.221
7	0	0%	0	0%	NC	NC
9	4	80%	1	20%	2.22	0.136
10	9	75%	3	25%	4	0.046

3. Presentation and Analysis of the DISCR Adjudication Site Results

The DISCR Site showed the second most statistically significant results to Questionnaire Part IV. Those results are presented in **Table 6-4.** Although none of the responses

TABLE 6-4

SUMMARY OF QUESTIONNAIRE PART IV RESULTS ANALYSIS OF DISCR SITE (n = 12) USING BOTH CASES ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI						
QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR. STAT.
	#	(%)	#	(%)		
1	9	75%	3	25%	3.09	0.079
2	9	75%	3	25%	3.09	0.079
3	8	67%	4	33%	1.33	0.248
4	4	33%	8	67%	1.33	0.248
5	9	75%	3	25%	3.09	0.079
7	2	40%	3	60%	0.139	0.709
9	7	78%	2	22%	2.72	0.1
10	9	75%	3	25%	3.09	0.079

were significant within the 5% level, and five questions (#'s 1, 2, 5, 9, and 10) were significant within 10% level. The results also indicate that question #6 had (4) positive and (8) responses, while question #8 had (9) positive and (3) negative responses. The statistically significant results showed that adjudicators

- preferred the presentation in the high-impact style cases (#1)
- felt that the information presented in the high-impact style was easier to read (#2)
- found it easier to apply the adjudication criteria to information in the high-impact style cases (#5)
- and preferred that all cases be written in the high-impact style (#10).

Also the respondents who answered "yes" to question #8 indicated in question #9 that they believe the high-impact writers were more competent than the low-impact ones. Although the remainder of the results are not statistically significant, they indicate that adjudicators prefer the high-impact documents.

D. ANALYSIS OF THE MALE ADJUDICATOR RESULTS

Just as in the previous two chapters, the analysis of the several demographic breakdowns produced no significant results except for the male adjudicator population. Those results are presented in **Table 6-5.** Seven preferences questions (#'s 1, 2, 3, 4, 5, 9, and 10) were significant at the 5% level, and none were significant within 10% level. The results also indicate that question #6 had (1) positive and (8) negative responses, while question #8 had (5) positive and (4) negative responses. The major significant result showed that the male adjudicators

- preferred the presentation in the high-impact style cases (#1),
- felt that the information presented in the high-impact style was easier to read and remember (#'s 2 and 3),
- had to reread information more often in the low-impact style cases (#4),
- found it easier to apply the adjudication criteria to information in the high-impact style cases (#5),
- and preferred that all cases be written in the high-impact style (#10).

TABLE 6-5

SUMMARY OF QUESTIONNAIRE PART IV RESULTS ANALYSIS OF MALE ADJUDICATORS (n = 9) USING BOTH CASES ADJUDICATOR'S PREFERENCE FOR HIGH OR LOW-IMPACT ROI						
QUEST #	PREFER HI		PREFER LI		CHI-SQR. STAT.	SIG. OF CHI-SQR. STAT.
	#	(%)	#	(%)		
1	8	89%	1	11%	5.76	0.016
2	8	89%	1	11%	5.76	0.016
3	8	89%	1	11%	5.76	0.016
4	1	11%	8	89%	5.76	0.016
5	8	89%	1	11%	5.76	0.016
7	0	0%	2	100%	2	0.157
9	5	100%	0	0%	5	0.025
10	8	89%	1	11%	5.76	0.016

Also the respondents who answered "yes" to question #8 indicated in the question #9 results that they believe that the high-impact writers were more competent than the low-impact ones.

These results confirms the findings in Questionnaire Part II and III. The male adjudicators are the mavericks in the adjudication population. They seem to believe more strongly than their female counterparts that the high-impact style cases are a great improvement over the current low-impact ones.

E. CHAPTER CONCLUSION

The overall results to Questionnaire Part IV point out that there is statistically significant evidence to show that adjudicators prefer cases be written in the high-impact rather than the low-impact style. Specifically, the analysis indicates the adjudicators prefer the high-impact over the low-impact style relative to the following factors:

- presentation of information;
- ease of reading, remembering, and applying the adjudication criteria;
- amount of rereading;
- and overall writing style.

When the Questionnaire Part IV analysis was broken down by adjudication site, the statistical significance was not nearly as great as the results from the entire population. This result could be attributed to the different sample sizes used in the analysis of both cases and each site (i.e. 40 versus 12 adjudicators). The greatest statistical differences was found in the results from the Navy adjudicators, with DISCR coming second, and Army third.

Similar to the result in the previous two chapters, the most surprising result was found from the analysis of the demographic breakdown of the adjudicators. The survey responses from the male adjudicators produced statistically significant results.

VII. CONCLUSIONS AND RECOMMENDATION

A. CONCLUSIONS

Examining Questionnaire Part II, III and IV results from the high and low-impact treatment of both the Czarnek and Rokitka cases point out that the adjudicators prefer the high-impact style over the currently used low-impact one. The data indicates the adjudicators prefer the high-impact style for its

- presentation of information;
- ease of reading, remembering, and applying the adjudication criteria;
- limited amount of rereading;
- and overall writing style.

There was, however, no statistical evidence to show that the high-impact case decreases adjudication time.

In the area of the adjudicators' impression of the case information, the analysis does produce statistically significant evidence to indicate that adjudicators feel that the high-impact style is an improvement over the low-impact style. Specifically, they believe that the high-impact style

- provides better coverage of issues;
- makes it easier to apply adjudication criteria to the case information;

- makes the field agent who wrote the case seem more aware of 1) how to make the case easier to read; 2) their informational needs; 3) the extensive amount of their daily reading;
- makes the field agent seem like a better writer;
- makes the derogatory information in the narrative report easier to find, read, remember and adjudicate;
- makes following the chronological sequence of events in the case easier to follow;
- and causes less fatigue while reading.

To a lesser degree they believe that the high-impact style makes them more confident in the soundness and quality of their adjudication decision, causes them to reread sentences less often, and produces less eye stain.

The analysis of the adjudicators' perception of the field agents provided statistically significant evidence to show that the field agents who wrote high-impact style cases are perceived differently than those who composed low-impact ones. Specifically, they feel that the agents writing in a high-impact style possess better judgment, are better organized, and are more precise, careful, clear thinking, and efficient than writers of low-impact cases. These perceived attributes may increase field agent credibility, which could improve the efficiency of the entire adjudication process.

Both Part II and III results indicate that there were greater statistically significant differences between high and low-impact case treatments of the Rokitka cases than the Czarnek cases. This result is contrary to expected results

because the Czarnek case content is more complicated and longer than Rokitka case content. One would expect that the longer and more complicated a document's content, the more helpful the high-impact style would be in reading, finding, and processing information.

When the analysis was divided by adjudication site, the statistical significance was not nearly as great as the result from the entire population. However, this could be attributed to the smaller sample sizes used. Overall, the greatest number of statistical differences were found from the analysis of the Navy adjudication site data. The Army adjudication site data produced the second most statistically significant result, while DISCR data came in a distant third.

The most surprising result was found when analyzing the demographic breakdown of adjudicators. The male adjudicators found that the high-impact style decreased the time required to adjudicate a case. They also felt that the high-impact cases were a much greater improvement over the current low-impact cases. Finally, their perception of the field agents who wrote the high-impact cases was extremely different than the low impact authors. These results may be due to the fact that males are a minority and could be considered outsiders. Outsiders may be more willing to change the status quo of an organization than insiders.

B. RECOMMENDATIONS

The overall results to Questionnaire Parts II, III, and IV clearly point out that the adjudicators perceive the high-impact style cases to be superior to the current low-impact style. Specifically, most adjudicators prefer that all ROI's be written in a high-impact style.

With this in mind, DIS should heed their customers' desires and train their field agent to write ROI's in a high-impact style. Although the high-impact style does not at a statistically significant level improve the decision making ability nor decrease case assessment time, we still believe that DIS should adopt the high-impact style in the spirit of improved customer support.

If implemented, the high-impact ROI's could increase the efficiency of the adjudication process. The adjudicators will be seeing cases written in a way they perceive as more efficient. This perceived efficiency may increase the field agents's credibility in the eyes of adjudicators and thus produce greater adjudicator confidence in the ROI case information. This increased credibility and confidence in the case information could reduce requests for additional information concerning the case subject. This reduction in requests for additional information will thus decrease overall case processing time.

APPENDIX A

PART II

INSTRUCTIONS

This form is designed to capture your impressions of the case information you've read and the adjudication process you've undergone. Please read each of the following statements carefully, and then place an "X" next to the place on the scale that best describes your response to each statement.

For example, if you were responding to the statement

It was _____ for me to find important information in the case.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Easy Difficult

and you felt that to find information it was

easy:	check # 1
somewhat easy:	check # 2
neither easy nor difficult:	check # 3
somewhat difficult:	check # 4
difficult:	check # 5

STATEMENTS

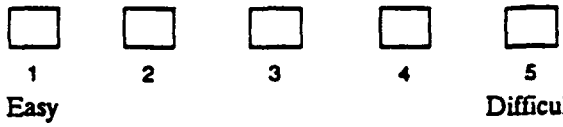
1. This case provided _____ coverage of issues to enable me to make a high quality adjudication decision.

☐ ☐ ☐ ☐ ☐

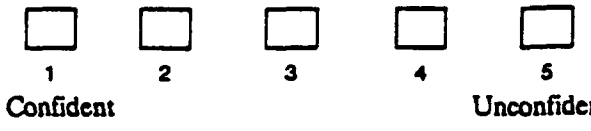
1 2 3 4 5

Good Poor

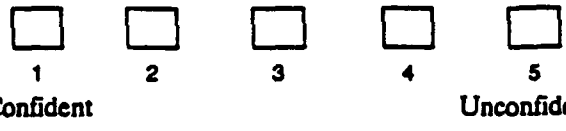
2. The way field agents presented derogatory information in the case made it _____ to apply adjudication criteria to that information.



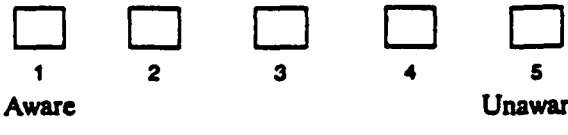
3. The way derogatory information was presented made me _____ in the quality of the field agents' investigation.



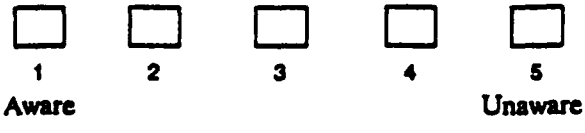
4. After reading the case, I am _____ in the soundness of my adjudication decision.



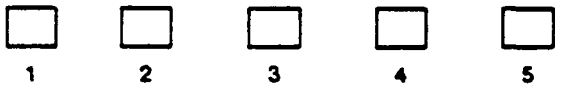
5. The field agents seemed to be _____ of the information I needed to make a high quality adjudication decision.



6. The field agents who wrote this case seemed to be _____ of how to make the case easy for me to read.



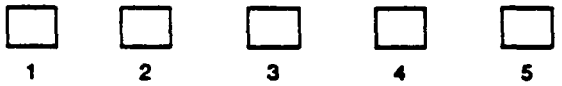
7. Based on the way field agents presented information in the case, they seemed to be _____ of the large amounts of information I have to read daily.



1 2 3 4 5

Aware Unaware

8. I believe the field agents who wrote the narrative reports for this case are _____ writers.



1 2 3 4 5

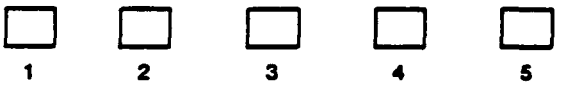
Good Poor

9. I _____ that the field agent who wrote the case's subject interview section should receive training to make his/her writing more readable.

1 2 3 4 5

Agree Disagree

10. I was able to read this case _____ than similar cases.



1 2 3 4 5

Faster Slower

11. The way field agents presented information in their narrative reports made it _____ to find derogatory information.

1 2 3 4 5

Easy Difficult

12. Derogatory information written by the field agents was _____ to read..

1 2 3 4 5

Easy Difficult

13. I thought the subject interview section of the case was _____ to read.

1 2 3 4 5

Easy Difficult

14. The way the field agent presented derogatory information made it _____ to remember that information.

1 2 3 4 5

Easy Difficult

15. I found the case to be _____ to adjudicate.

1 2 3 4 5

Easy Difficult

16. It was _____ for me to locate information essential to my efficient adjudication of the case.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Easy Difficult

17. To understand what the field agent was trying to convey, I _____ had to reread a section or sections of the case.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Often Never

18. I _____ had to reread sentences to understand the exact idea field agents were trying to convey.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Often Never

19. I found it _____ to follow the chronological sequence of events in the case.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Easy Difficult

20. To help me understand the logical connection between ideas in the case, I _____ had to either underline parts of the case or make notes.

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Often Never

21. I _____ encountered words that were difficult to understand while reading the field agents' narratives.

1 2 3 4 5

Often Never

22. Reading this case tired me out.

1 2 3 4 5

Agree Disagree

23. Reading this case strained my eyes.

1 2 3 4 5

Agree Disagree

APPENDIX B

PART III

INSTRUCTIONS

Please indicate your perceptions or feelings toward the field agents who wrote the ROI you've just read by placing an "X" near the item that best describes that perception.

For example, if after reading the ROI, you feel the field agents are

Thorough:	check # 1
Somewhat thorough:	check # 2
Neither thorough nor careless:	check # 3
Somewhat careless:	check # 4
Careless:	check # 5

Use this guideline to respond to the following items.

PERCEPTIONS OF FIELD AGENTS

1. 1 2 3 4 5
   Thorough ... Careless

2. 1 2 3 4 5
   Competent ... Incompetent

3. 1 2 3 4 5
   Objective ... Biased

PERCEPTIONS OF FIELD AGENTS (Continued)

4. 

5. 

6. 

7. 

8. 

9. 

PERCEPTIONS OF FIELD AGENTS (Continued)

10. 

11. 

12. 

13. 

14. 

15 

APPENDIX C

PART IV

Information presented in both cases was written and formatted in different styles. Please provide us with your impressions or feelings about these different written styles by checking the appropriate responses to the statements listed below.

1. I preferred the way information was presented in

   Case I ____

   Case II ____

2. I felt the case that was easier to read was

   Case I ____

   Case II ____

3. Information was easier to remember in

   Case I ____

   Case II ____

4. I had to reread information more often in

   Case I ____

   Case II ____

5. I found it easier to apply adjudication criteria to information in

   Case I ____

   Case II ____

6. I felt the two cases' different writing styles affected my confidence in my adjudication decision.

   Yes ____

   No ____

7. If you answered "yes" to question 6, did you feel more confident of your decision when you adjudicated Case I or Case II?

   Case I ____

   Case II ____

8. I felt the cases' different written communication styles affected my perception of the competence of the field agents.

   Yes ____

   No ____

9. If you answered "yes" to question 8, did you feel that the field agents who wrote Case I or Case II were more competent?

   Case I ____

   Case II ____

10. I would prefer that <u>all</u> ROIs be written in the style of

    Case I ____

    Case II ____

LIST OF REFERENCES

Battison, R. and Landesman, J., "The Cost Effectiveness of Designing Simpler Documents", Simply Stated, v. 16, pp. 1-3, 1984.

Benson, P. J., "Writing Visually: Design Considerations in Technical Publications," Technical communication, v. 21, pp. 32-41, 1985.

Bever, T.G., "Perception in Thought and Language", In J. Carrol and R.D. Freedle's book Language Comprehension and the Acquisition of Knowledge, John Wiley, 1972.

Bransford, J.D., and Johnson, M.K., "Consideration of Some Problems of Comprehension", In W. Chase's book Visual Information Processing, Academic Press, 1973.

Bransford, J.D., and Johnson, M.K., "Contextual Prerequisites for Understanding: Some Investigations of Comprehension and Recall", Journal of Verbal Learning and Verbal Behavior, v. 11, pp. 717-726, 1972.

Charrow, V., and Charrow, R., "Making Legal Language Understandable: Psycholinguistic Study of Jury Instructions", Columbia Law Review, v. 79, pp. 1306-1374, 1979.

Clark, H., and Clark, E., "Semantic Distinctions and Memory for Complex Sentences", Quarterly Journal of Psychology, v. 20, pp. 129-138, 1968.

Danks, J., and Sorce, P., "Imagery and Deep Structure in the Prompted Recall of Passive Sentences", Journal of Verbal Learning and Verbal Behavior, v. 12, pp. 114-117, 1973.

Defense Personnel Security Research and Education Center Technical Report PERS-TR-92-008, Comparison of High and Low-Impact Report of Investigations on Adjudicators' Decision Making: A Pilot Study, by J. Suchan, 1992.

Defense Personnel Security Research and Education Center Technical Report PERS-TR-91-006, The Defense Investigative Service's Issue Case Data Base: Analysis of Issue Types and Clearance Adjudication, by M. Wiskoff, and C. Fitz, 1991.

Defense Personnel Security Research and Education Center Technical Report PERS-TR-90-006, Investigative Report Writing: A Field Study, by J. Suchan, 1989.

Defense Personnel Security Research and Education Center Technical Report PERS-SR-89-010, Report of Proceedings of Productivity of Sources Workshop 27-28 April 1989, by E. Haag, C. Schroyer, and K. Crawford, 1989.

Defense Personnel Security Research and Education Center Technical Report PERS-TR-90-004, Issues Developed in Background Investigations Conducted by Defense Investigative Service, by P.A. Lewis, E. Koucheravy, and R. Carney, 1989.

Duffy, T. M., "Readability formulas: What's the Use", In T. M. Duffy, and R. Waller's book Designing Useful Texts, pp. 89-125, Academic Press, 1985.

Felker, D. B., Redish, J.C., and Peterson, J., "Training Authors of Informative Documents", In T.M. Duffy, and R. Waller's book Designing Useful Texts, pp. 43-61, Academic Press, 1985.

Fielden, J. S., and Dulek, R., Bottom Line Business Writing, Prentice-Hall, 1984.

Fodor, J. and Garrett, M., "Some Syntactic Determinants of Sentential Complexity", Perception and Psychophysics, v. 2, pp. 286-298, 1967.

Guillemette, R. A., "Predicting Readability of Data Processing Written Materials", Data Base, pp. 41-51, Summer 1987.

Hartley, J., and Trueman, M., "A Research Strategy for Text Designers: The Role of Headings", Instructional Science, v. 14, pp. 99-155, 1985.

Haviland, S., and Clark, J., "What's New? Acquiring New Information as Process in Comprehension", Journal of Verbal Learning and Verbal Behavior, v. 13, pp. 511-522, 1974.

Hirsch, E.D., Philosophy of Composition, University of Chicago Press, 1977.

Kostelnick, C., "A Systematic Approach to Visual Language in Business Communication", Journal of Business Communication, v. 25, pp. 29-48, 1988.

McClure, G., "Writer Perception of Reader Preference", paper presented at the International Professional Communication Conference, Guildford, UK, 12-14 September 1990.

Miller, G.A., The Psychology of Communication, Penguin, 1970.

Miller, G.A., "The Magical Never Seven, Plus or Minus Two", Psychological Review, v. 63, pp. 81-97, 1956.

Miller, G. and Isard, S., "Free Recall of Self-Embedded English Sentences", Information and Control, v. 7, pp. 292-303, 1964.

Mirel, B., "Cognitive Processing, Text Linguistics and Documentation Writing", Journal of Technical Writing and Communication, v. 18, pp. 114-131, 1964.

Olson, D.R., and Filby, N., "On the Comprehension of Active and Passive Sentences", Cognitive Psychology, v. 3, pp. 361-381, 1972.

Redish, J.C., "Writing in Organizations", In M. Kogen's book Writing in the Professions, pp. 97-124, NCTE, 1989.

Redish, J.C., Battison, R.M., and Gold, E.S., "Making Information Accessible to Readers", In L. Odell, and D. Goswami's book Writing in Nonacademic Settings, pp. 129-154, Guilford Press, 1985.

Rosch, E., "On the Internal Structure of Perceptual and Semantic Categories", In T.E. Moore's book, Cognitive Development and the Acquisition of Language, Academic Press, 1973.

Rosch, E., " Cognitive Representation of Semantic Categories", Journal of Experimental Psychology, v. 104, pp. 192-233, 1975.

Rubens, P.M., "A Reader's View of Text and Graphics: Implications for Transactional Text", Journal of Technical Writing and Communication, v. 16, pp.80-91, 1986.

Seigel, A., Designing Readable Documents: State of the Art, Seigel & Dale, 1978.

Selzer, J., "Readability is Four-Letter Word", Journal of business Communication, v. 18(4), pp. 23-24, 1981.

Selzer, J., "What Constitutes a Readable Technical Style? In Anderson, P.V., Brockmann, J.R., and Miller, C.R. (Eds.), New Essays in Scientific and Technical Communication: Research, Theory, Practice, pp. 71-89, Baywood, 1983.

Suchan, J., "Communication Efficiency Between High-Impact and Bureaucratic Written Communication", Management Communication Quarterly, v. 2, pp. 452-484, 1989b.

INITIAL DISTRIBUTION LIST

1.	Director Training and Education MCCDC Code C46 1019 Elliot Road Quantico, VA 22134-5027	1
2.	Defense Technical Information Center Cameron Station Alexandria, VA 22304-6145	1
3.	Defense Personnel Security Research and Education Center 99 Pacific St., Bld. 455E Monterey, CA 93940-2481	2
4.	Professor James Suchan Code AS/SA Naval Postgraduate School Monterey, CA 93943-5002	1
5.	Library, Code 052 Naval Postgraduate School Monterey, CA 93943-5002	2
6.	Captain Mark D. LaViolette 501 Slaters Lane, #320 Alexandria, VA 22314	1